

HEARING OFFICER'S REPORT

TO: The Honorable Shawn M. Garvin
Cabinet Secretary, Department of Natural Resources and Environmental Control

FROM: Lisa A. Vest
Regulatory Specialist, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Permit Applications of Artesian Wastewater Management, Inc. (“Artesian”), for (1) Wastewater Facilities Construction Permit Application and associated Draft Permit (WPCC 3007/20) (“Force Main Construction Permit Application”); and (2) On-Site Wastewater Treatment and Disposal System Operations Permit Amendment for the Beaver Creek Wastewater Treatment Facility (“Beaver Creek Permit Amendment”). (Hearing Docket No. 2020-P-W-0026)

DATE: December 20, 2021

I. BACKGROUND AND PROCEDURAL HISTORY:

A virtual public hearing was held on Tuesday, November 17, 2020, at 6:00 p.m. via the State of Delaware Cisco WebEx Meeting Platform by the Department of Natural Resources and Environmental Control (“DNREC” or “Department”) to receive comment on the following permit applications of Artesian Wastewater Management, Inc. (“Artesian” or “Applicant”) currently pending before the Department:

(1) *Wastewater Facilities Construction Permit Application and Draft Permit (WPCC 3007/20)* for construction of a force main from the intersection of the Lewes-Georgetown Highway and Gravel Hill Road to the Park Avenue intersection in Sussex County, Delaware (“Force Main Construction Permit Application”); and

(2) *On-Site Wastewater Treatment and Disposal System Operations Permit (No. 359014-06) Amendment for the Beaver Creek Regional Wastewater Treatment Facility*, owned and operated by Artesian, and located near the intersection of State Road 5 and State Road 9, Sussex County, Delaware (tax map #2-35-30.00-24.00 & 32.00) (“Beaver Creek Permit Amendment”).

It should be noted that the Department processed both the above Artesian applications together to assure both efficiency and transparency, and to make sure the public was afforded the ability to provide meaningful comment jointly on these matters. Accordingly, presentations on both pending permit applications were offered at the public hearing held on November 17, 2020. This Hearing Officer's Report ("Report") will address each of these permitting matters in full, starting with the Force Main Construction Permit Application, and then the Beaver Creek Permit Amendment.

**(1) Wastewater Facilities Construction Permit Application and Draft Permit
(WPCC 3007/20) - "Force Main Construction Permit Application"**

On January 23, 2020, the Department's Division of Water, Surface Water Discharges Section ("SWDS"), received an application for a Wastewater Facilities Construction Permit from Artesian, pursuant to the requirements of Section 4 of 7 DE Admin. Code 7201, *Regulations Governing the Control of Water Pollution*, to construct approximately eleven thousand, seven hundred and thirty-five linear feet ("11,735 LF") of twelve (12) inch diameter force main from Park Avenue, Steiner Road, Lewes-Georgetown Highway (Route 9) and connect to their existing twelve (12) inch PVC force main near the Hawthorne Subdivision. The proposed force main would allow for the transmission of wastewater to the Beaver Creek Regional Wastewater Treatment Facility ("WWTF"), permitted under State Permit DEN Number 359014-06 for on-site wastewater treatment and disposal.

On February 9, 2020, the Department published legal notice for the above-described Force Main Construction Permit Application in *The News Journal*, the *Delaware State News*, and on the Department's website. Subsequently, the Department received requests for additional information and requests for a public hearing from numerous members of the public. Accordingly, on October 20, 2020, the Department published legal notice in *The News Journal*, the *Delaware State News*, and on the Department's website that a public hearing on the Force Main Construction Permit Application would be held on November 17, 2020.

(2) On-Site Wastewater Treatment and Disposal System Operations Permit (No. 359014-06) Amendment for the Beaver Creek Regional Wastewater Treatment Facility – “Beaver Creek Permit Amendment”

On February 9, 2018, the Department’s Groundwater Discharges Section (“GWDS”) issued a State of Delaware On-Site Wastewater Treatment and Disposal System (“OWTDS”) Operations Permit (No. 359014-06) to Artesian to operate the Beaver Creek Regional WWTF (“Beaver Creek”) for the treatment and disposal of sanitary waste, in accordance with Sussex County Conditional Use Ordinance No. 1992. The OWTDS Operations Permit No. 359014-06 is currently in effect, and includes effluent limitations, operational, monitoring and reporting requirements, and conditions designed for the protection of public health and the environment, as required by 7 DE Admin. Code 7101, *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (“OWTDS Regulations”).

The Beaver Creek facility is owned and operated by Artesian and is located near the intersection of State Road 5 and State Road 9, Sussex County, Delaware (tax map 2-35-30.00-24.00 & 32.00). The facility consists of an influent screen/grit removal system, a dual Aqua-Aerobic Sequencing Batch Reactor treatment system (SBR1 and SBR2), a screened effluent equalization basin, a chlorine contact tank for disinfection, an optional secondary digester tank, and six (6) Rapid Infiltration Basins (“RIBs”) for final disposal of treated wastewater (effluent). The existing Operations Permit limits the daily monthly average influent flow to 150,000 gallons per day (“GPD”) until SBR 2 and the secondary digester are brought online, at which point the facility is authorized to treat an influent flow of 300,000 GPD.

On January 23, 2020, the SWDS received Artesian’s application for the Force Main Construction Permit, as set forth above. As previously noted, the purpose of the force main extension is to allow a future twelve (12) inch diameter Sussex County force main to interconnect with the proposed Artesian force main on Park Avenue, thus allowing Sussex County to utilize the Beaver Creek facility for some of their customers in this area.

Pursuant to Section 6.5.3.3 of the OWTDS Regulations, the GWDS determined that an amendment to the existing Beaver Creek Operations Permit was required to incorporate enhanced notification and reporting requirements associated with this interconnection. Accordingly, a draft OWTDS Operations Permit Amendment for the Beaver Creek facility was prepared by the GWDS. Thereafter, on October 20, 2020, the Department published a detailed Legal Notice in *The News Journal*, the *Delaware State News*, and on the Department's website, notifying the public that a public hearing would be held on November 17, 2020, regarding both the proposed Force Main Construction Permit Application and the proposed Beaver Creek Permit Amendment, as described above.

Department staff, representatives of the Applicant, and members of the public attended the virtual public hearing on November 17, 2020. The hearing record ("Record") remained open for receipt of comment through December 2, 2020. It should be noted that comments were received from the public at the time of the public hearing, as well as during both the pre- and post-hearing phases of this matter, all of which were posted on the DNREC hearing web page dedicated to this matter. Proper notice of the hearing was provided as required by law.

II. SUMMARY OF THE PUBLIC HEARING RECORD:

The Record consists of the following documents:

- (1) The official verbatim Transcript of Proceedings from Wilcox & Fetzer, Ltd., generated from the virtual public hearing of November 17, 2020;
- (2) Nine (9) exhibits identified as the Department's Exhibits regarding the Artesian applications as referenced above, introduced by responsible Department staff at the aforementioned hearing, and marked accordingly as "Dept. Exh. 1-9";
- (3) Copy of the Applicant's PowerPoint presentation offered at the public hearing, marked accordingly on the hearing web page dedicated to this matter as "Artesian Exh. 1";

(4) Copy of the Applicant's comments on the Draft Permit, provided to the Department in correspondence from Artesian dated November 12, 2020, and marked accordingly on the hearing web page dedicated to this matter as "Artesian Exh. 2";

(5) Eleven (11) comments received from various members of the public regarding the Artesian applications as referenced above, as identified on the hearing web page dedicated to this matter under the "Public Comments" section;

(6) Technical Response Memorandum ("TRM") prepared by the Department's SWDS regarding Artesian's Force Main Construction Permit Application, dated September 23, 2021, and then *revised* December 17, 2021 (to correct clerical errors). The *revised* TRM is expressly incorporated into this Report and attached hereto as Appendix "A";

(7) The Draft Permit prepared by the Department's SWDS regarding Artesian's Force Main Construction Permit Application, as identified at the time of the public hearing as "Department's Exh. 6" and posted as such on the hearing web page dedicated to this matter. The Draft Permit is expressly incorporated into this Report and attached hereto as Appendix "B"; and

(8) TRM prepared by the Department's GWDS regarding the proposed Amendment to Artesian's existing Beaver Creek Permit, dated June 14, 2021, and then *revised* December 17, 2021 (to clarify the distinction between a permit "modification" and a permit "amendment"). The *revised* TRM (which includes the *revised final* Draft Permit from GWDS) is expressly incorporated into this Report and attached hereto as Appendix "C."

The Department's persons primarily responsible for reviewing both Artesian applications, Bryan Ashby, Environmental Scientist, SWDS, and Gordon Woodrow, Program Manager 1, SWDS (regarding the Force Main Construction permit application), and John Rebar, Jr., Environmental Program Manager I, GWDS (regarding the Beaver Creek permit amendment), as referenced above, developed the Record with the relevant documents in the Department's files.

As set forth previously herein, the Record generated in this matter indicates that numerous members of the public offered both oral and written comments regarding the above Artesian applications. At the request of this Hearing Officer, the technical experts in the Department's SWDS and GWDS each prepared a Technical Response Memorandum ("TRM") to (1) specifically address the concerns associated with the respective application pending before each section, as set forth in the public comments received by the Department; and (2) offer conclusions and recommendations regarding both pending permitting matters for the benefit of the Record. The *revised* TRM from SWDS, dated December 17, 2021 (regarding the proposed Force Main Construction) and the *revised* TRM from GWDS, dated December 17, 2021 (regarding the proposed Beaver Creek Permit Amendment), which also includes the *revised final* Draft Permit associated with the proposed Beaver Creek Permit Amendment, provide a summary of the public comments received by the Department in this matter, and offer detailed responses to the same.

I find that the *revised* TRMs, as provided by the Department's experts in both SWDS and GWDS, offer comprehensive reviews of all aspects of Artesian's pending applications, address the areas of concern voiced by the public comments received by the Department regarding these permitting matters, and provide responses to those comments in a balanced manner, accurately reflecting the information contained in the Record. Accordingly, the SWDS's *revised* TRM of December 17, 2021, regarding Artesian's proposed Force Main Construction Permit Application and the associated Draft Permit for that application, are attached hereto for review as Appendices "A" and "B," respectively, and are hereby expressly incorporated herein. Additionally, the GWDS's *revised* TRM of December 17, 2021, regarding the proposed Beaver Creek Permit Amendment (which includes the associated *revised final* Draft Permit) is attached hereto for review as Appendix "C," and is also hereby expressly incorporated herein.

III. RECOMMENDED FINDINGS AND CONCLUSIONS:

Currently pending before the Department are the above-described applications submitted by Artesian for (1) the Force Main Construction Permit Application; and (2) proposed Beaver Creek Permit Amendment. I find that the Applicant is required to obtain these permits, for the reasons noted above. I further find that the Applicant's above-described permit applications are subject to various state and federal regulatory requirements, including, but not limited to, including, but not limited to, 7 DE Admin. Code 7201, *Regulations Governing the Control of Water Pollution* (with regard to the Force Main Construction Permit) and 7 DE Admin. Code 7101, *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (with regard to the Beaver Creek Operations Permit Amendment), and as provided for under 7 *Del.C.* Ch. 60.

In reviewing the applicable statutes and regulations, as well as weighing public benefits of this project against potential detriments, the Department's experts in both the SWDS and the GWDS have concluded that the pending permit applications comply with all applicable federal and state laws and regulations. Should these applications be approved, both the Force Main Construction Permit and the Beaver Creek Operations Permit Amendment that would be issued by the Department would be reflective of the respective applications submitted for each matter by Artesian and would be appropriately conditioned to ensure continued protection of public health and the environment.

The Department's *revised* TRMs acknowledge the comments received from the public concerning both Artesian applications, and thoroughly respond to the same. For the purposes of brevity, this Report defers to the attached *revised* TRMs in their entirety for a comprehensive understanding of the concerns raised in the public comments received by the Department in this matter, as well as the Department's formal responses to the same, as provided by both the SWDS and the GWDS. Rather than attempting to relay each concern voiced by the public in the comments received in this matter, this Report will highlight the Department's responses to each application, as provided for in full within each respective TRM provided by the Department.

(1) Revised SWDS TRM regarding Artesian's Force Main Construction Application

To correct clerical error contained within the original TRM dated September 23, 2021, the SWDS provided to this Hearing Officer a *revised* TRM, dated December 17, 2021, in response to the public comments received on Artesian's proposed Force Main Construction application. It should be noted that the Department's responses set forth in the *revised* TRM remain unchanged from those set forth in the original TRM provided by the SWDS in this matter.

The SWDS's responses to the comments received on the Applicant's proposed Force Main Construction project provided clarifying answers to questions raised by the public regarding this application. Additionally, the *revised* TRM from SWDS confirms that all applicable regulatory requirements concerning the proposed Force Main Construction have been met, and that the Draft Wastewater Facilities Construction Permit is protective of human health and the environment while being consistent with applicable State and Federal regulations. It should also be noted that no changes were necessitated to the Draft Permit for Artesian's Force Main Construction because of the public comment received by the Department in this matter. Thus, the Draft Permit remains as initially prepared by the SWDS at the time of the public hearing, and as posted on the hearing web page dedicated to this matter as Department Exh. 6.

As stated previously, a more detailed response to the comments received from the public regarding Artesian's Force Main Construction Permit Application can be found by reviewing the *revised* TRM provided by SWDS, expressly incorporated herein in its entirety, and attached hereto as Appendix "A."

(2) Revised GWDS TRM regarding the Beaver Creek Permit Amendment

As noted previously, the GWDS revised the original TRM provided to this Hearing Officer to offer clarity between the use of the word “amendment” and “modification.” The term “amendment” refers to the actual Permit document, while “modification” references the physical changes to processes or systems.

The Department received both letters of support for the project and proposed draft permits, while other comments from two individuals highlighted various concerns. It should be noted that, during the GWDS’s review of the written comments received in this matter, the GWDS paraphrased and grouped similar comments together. Additionally, the GWDS received written comments on the proposed draft permit amendment from the Applicant in a letter dated November 12, 2020, which is incorporated into the *revised* TRM as “Appendix 2,” and referenced in Section II of this Report as “Artesian Exh. 2.”

In discussing the potential environmental impacts of the proposed Beaver Creek Permit Amendment, the GWDS’s *revised* TRM notes that the proposed Beaver Creek Permit Amendment does not change or remove any of the current effluent limitations, operational, monitoring or reporting conditions already existent. Rather, the amendment only proposes the addition of several special conditions associated with the interconnection proposed in the Applicant’s permit application and Draft Permit (WPCC3007/20). This includes: (1) notifications and authorizations associated with the already approved influent flow of 300,000 GPD; (2) assurances that only influent flows authorized by the Sussex County Conditional Use Ordinance No. 1992 will be treated and disposed at the Beaver Creek facility; and (3) limitations on influent wastewater strength authorized to be received at the Beaver Creek facility for treatment and disposal.

The *revised* TRM notes that the GWDS believes the effluent limitations, operational, monitoring and reporting conditions and requirements included in the current permit and the special conditions associated with the proposed Sussex County interconnection proposed in the draft permit amendment are protective of public health and the environment, and will not have a significant environmental impact. However, to address the public's concerns regarding influent wastewater strength, the GWDS is recommending the addition of two special conditions requiring the sampling of inorganic and organic constituents on an annual basis. Analytical results will be submitted in the annual report, due February 28th each year.

One comment asked how a system failure at the Applicant's facility would be handled. In response, the *revised* TRM points to Part II A.1 of the Draft Permit amendment, requiring all structures, systems, and equipment used for treatment control and monitoring be properly maintained and operated as efficiently as possible. Part II A.3 of the Draft Permit amendment requires that, if for any reason the Permittee does not comply with or will be unable to comply with any limitations specified in the Permit, the Permittee will contact the GWDS within 24 hours of the non-compliance issue having occurred. Additionally, the Permittee would be required to submit the following information within five (5) days: (1) a description of, and cause of non-compliance with any permit limitation or condition; (2) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the non-complying condition; and (3) steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.

In the event of a spill, leaks, or other accidental release, Artesian is required to follow 7 *Del.C.* §6028, which states, in pertinent part, that any individual (i.e., Permittee) who causes or contributes to an environmental release (i.e., spill) of a pollutant into surface water, or groundwater, or on land, must report such an incident to the Department as soon as possible and activate their emergency site plan. Additional information is required to be reported to the Department concerning such an incident as well, pursuant to that statute.

Furthermore, the GWDS notes that any corrective actions performed or proposed associated with any non-compliance event or spill will be reviewed and approved by the Department and additional corrective actions, investigations, increased monitoring, or mitigation activities may be required.

As noted above, Artesian provided comments to the GWDS on the proposed Draft Permit Amendment following the public hearing of November 17, 2020. Those comments focused on the special conditions associated with the proposed Sussex County interconnection. Specifically, Artesian's comments identified condition language or requirements in the Draft Permit that were unclear, or not in-line with current operational practices or project status. The GWDS agrees with Artesian that additional clarification and condition language and/or requirements revision is needed. As such, several condition revisions are recommended and set forth in detail in the *revised* TRM and have been incorporated into the *revised final* Draft Permit. The following is a summary of that revised permit language:

1. The GWDS agrees with Artesian that a new Construction Permit is not required for wastewater treatment system upgrades needed to increase the facility's capacity from 150,000 GPD to 300,000 GPD. However, the GWDS does require the submission of additional information prior to the facility receiving over 150,000 GPD of influent flow. This was the intent of the original condition. Thus, the GWDS has recommended revised language for Part III A, Subpart (m) of the *revised final* Draft Permit Amendment to provide further clarity on this issue.
2. Artesian suggests requiring the submission of a formal request for authorization for the Beaver Creek facility to begin receiving up to 300,000 GPD of raw influent along with the updated Record Drawings and the Certificate of Completion. The GWDS agrees with this suggestion, which was the intent of the original condition. The *revised* TRM notes that such authorization may be issued in the form of a letter, minor permit amendment, or other regulatory instrument. Thus, the GWDS has recommended revised language for Part III A, Subpart (n) of the *revised final* Draft Permit Amendment to provide further clarity on this issue.

3. Artesian is only authorized to provide service to parcels for which it has been granted a Certificate of Public Convenience and Necessity (“CPCN”) by the Delaware Public Service Commission. Since both the Department and Sussex County receive notification of all CPCN applications, Artesian believes that no further notification by Artesian should be required. Furthermore, Artesian notes that the flow treated at Beaver Creek’s facility shall only be from sources authorized by the Conditional Use Approval granted by Sussex County for the Beaver Creek facility, and that flow that does not meet these criteria cannot be treated at Beaver Creek.

In response, the GWDS acknowledges that only flows from sources authorized by Sussex County Conditional Use Ordinance No. 1992 are authorized to be received by Artesian’s Beaver Creek facility for treatment and disposal. Additionally, the GWDS also receives CPCN application notifications. However, neither the Sussex County conditional use approval nor the CPCN applications provide the GWDS with sufficient detail to ensure a rigorous understanding of Artesian and Sussex County agreements, interconnections, and influent flow sources/areas. This more detailed information is also needed for public transparency. Therefore, the GWDS is seeking additional notification and detailed narrative information of how conditional use approvals and CPCN applications fit into the bigger regional sewage picture. The GWDS further agrees that additional clarifying language is required. Thus, the GWDS has recommended revised language for Part III A, Subpart (p) of the *revised final* Draft Permit Amendment to provide further clarity on this issue.

4. Artesian suggests that wastewater influent chemical characterization, regardless of the influents source, is the key consideration regarding maintaining a regional wastewater treatment system and achieving permit effluent limitations and protecting public health and the environment. Further, Artesian believes that it can properly treat wastewater with influent concentrations of 80 mg/L Total Nitrogen (“TN”), 400 mg/L 5-Day Biochemical Oxygen Demand (“BOD₅”), and 500 mg/L Total Suspended Solids (“TSS”), and is willing to require pretreatment from any source exceeding those concentrations.

In response, the GWDS agrees that routinely determining the chemical composition of influent wastewater is a key process control technique essential for the proper operation of a regional wastewater treatment facility. Therefore, the GWDS agrees with Artesian's proposal to monitor TN, BOD₅, and TSS (along with Total Dissolved Solids, or "TDS"), and to submit analytical results to the GWDS in the monthly monitoring reports. The *revised* TRM further notes that, if two consecutive months of data indicates influent TN, BOD₅, and TSS exceeds the proposed concentration values, then Artesian will be required to investigate and require pretreatment from any source exceeding those concentrations. Accordingly, the GWDS has recommended revised language for Part III A, Subpart (q) of the *revised final* Draft Permit Amendment to provide further clarity on this issue.

The GWDS believes that the *revised final* Draft Permit addresses the technical and regulatory concerns of both the public and the permittee, while fulfilling the Department's mission to protect the public health and the environment. It should be noted that the *revised final* Draft Permit supersedes all other versions of the Draft Permit previously incorporated into the Record by the Department in this matter.

As set forth in the GWDS's *revised* TRM, the proposed Beaver Creek Permit Amendment will require enhanced notification, monitoring and reporting requirements associated with the proposed Sussex County interconnect. Further, the proposed Beaver Creek Permit Amendment requires treated effluent discharged from the wastewater treatment system to achieve an annual average total nitrogen concentration of 10mg/L, which is in-line with Federal Drinking Water Standards and therefore protective of human health and environment. Additionally, the permit will require extensive water quality monitoring through influent and effluent monitoring, and the use of monitoring wells, thus allowing the GWDS to evaluate the condition of groundwater resources at the Beaver Creek facility to assure permitted treated effluent disposal is not having a negative impact on groundwater quality. The *revised* TRM from GWDS further notes that, in the event trends of increasing concentrations and/or impacts are observed, Artesian will be required to take all necessary actions to eliminate and correct any adverse impact on public health or the environment resulting from permit non-compliance.

I find that the GWDS's *revised* TRM offers a thorough and detailed review of all aspects of the Applicant's pending Beaver Creek Permit Amendment, addresses those concerns germane to the subject matter of the aforementioned public hearing held by the Department in this matter, and responds to them in a balanced manner, accurately reflecting the information contained in the Record. Thus, as noted previously, the GWDS's *revised* TRM (dated December 17, 2021), along with the *revised final* Draft Permit incorporated therein, is attached hereto as Appendix "C," and is expressly incorporated herein as such.

The Record developed in this matter indicates that the Department's experts in both the SWDS and the GWDS have considered all statutes and regulations that govern permitting actions such as Artesian's proposed Force Main Construction Permit and Beaver Creek Permit Amendment and have recommended approval of the same. I find and conclude that the Applicant has adequately demonstrated compliance with all requirements of the statutes and regulations and is continuing to work with the Department to assure Artesian's commitments and ongoing compliance requirements are met, as noted herein.

I further find that the Record supports approval of both the proposed Force Main Construction Permit and the proposed Beaver Creek Permit Amendment, as submitted by Artesian to the SWDS and the GWDS, respectively, in this matter. Moreover, I find and conclude that the Record supports the recommendations of the Department's experts in the SWDS and the GWDS, as set forth in the *revised* TRMs of December 17, 2021, for the reasons noted above.

Further, I recommend the Secretary adopt the following findings and conclusions:

1. The Department has jurisdiction, as provided for under 7 *Del.C.* Ch. 60, 7 DE Admin. Code 7101, *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*, 7 DE Admin. Code 7201, *Regulations Governing the Control of Water Pollution*, and all other relevant statutory authority, to make a final determination on the aforementioned pending permit applications submitted by Artesian after holding a public hearing, considering the public comments, and all information contained in the Record generated in this matter;
2. The Department provided proper public notice of the aforementioned applications submitted to the Department by Artesian, and of the public hearing held on November 17, 2020, and held said hearing to consider any public comments that may be offered on the applications, in a manner required by the law and regulations;
3. The Department considered all timely and relevant public comments in the Record, as established in the SWDS's *revised* TRM of December 17, 2021, the SWDS Draft Permit, and the GWDS's *revised* TRM of December 17, 2021 (which includes the GWDS *revised final* Draft Permit), all of which have now been expressly incorporated into the Record generated in this matter;
4. The Department has carefully considered the factors required to be weighed in issuing the permits required by the aforementioned applications submitted to the Department by Artesian, and finds that the Record supports approval of the same;
5. The Department shall issue to Artesian the following permits: (1) a Wastewater Facilities Construction Permit for the proposed force main construction, consistent with the SWDS Draft Permit; and (2) an Amendment to the existing On-Site Wastewater Treatment and Disposal System Operations Permit, consistent with the GWDS *revised final* Draft Permit, as proposed for the Beaver Creek Regional Wastewater Treatment Facility, consistent with the Record developed in this matter.

6. Furthermore, said permits shall include all conditions as set forth in the Department's *revised* TRMs prepared by both the SWDS and the GWDS, along with the SWDS Draft Permit and the *revised final* GWDS Draft Permit, to ensure that Delaware's environment and public health will be protected from harm;
7. The Department has an adequate Record for its decision, and no further public hearing is appropriate or necessary; and
8. The Department shall serve and publish its Order on its internet site.

/s/Lisa A. Vest
LISA A. VEST
Regulatory Specialist

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Appendix A: SWDS *Revised* TRM - Artesian Force Main Construction Permit (12/17/21)

Appendix B: SWDS Draft Permit – Artesian Force Main Construction Permit

Appendix C: GWDS *Revised* TRM and *Revised Final* Artesian Beaver Creek Operations Permit Amendment (12/17/21)



STATE OF DELAWARE
**DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**
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**SURFACE WATER
DISCHARGES**

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MEMORANDUM

TO: Lisa Vest, Hearing Officer, Office of the Secretary

THROUGH: Virgil Holmes, Director, Division of Water
Jennifer S. Roushey, Environmental Program Administrator, Division of Water

FROM: Bryan A. Ashby, Environmental Scientist, Surface Water Discharges Section

RE: Technical Response Memorandum Regarding the November 17, 2020 Public Hearing on Artesian Wastewater Management, Inc.'s Wastewater Facilities Construction Permit Application and Draft Permit (WPCC 3007/20) for a force main from the intersection of the Lewes-Georgetown Highway and Gravel Hill Road to the Park Ave intersection in Sussex County.

DATE: September 23, 2021 (revised December 17, 2021)

Bryan A. Ashby

This Technical Response Memorandum (TRM) was prepared at the request of the presiding Hearing Officer to assist in the completion of the Hearing Officer's Report to the Secretary of the Department of Natural Resources and Environmental Control (Department). In addition, this TRM provides information to help inform the final decision on the Wastewater Facilities Construction Permit Application by Artesian Wastewater Management, Inc. for the construction of approximately eleven thousand seven hundred and thirty-five linear feet (11,735 LF) of twelve (12) inch diameter force main from their existing twelve (12) inch diameter force main at the intersection of the Lewes-Georgetown Highway (Rt. 9) and Gravel Hill Road (Rt. 30), continuing west on Rt. 9 to the Steiner Road intersection, continuing south on Steiner Road approximately one thousand five hundred (1,500) feet to the railroad tracks, and then continuing approximately three thousand five hundred (3,500) feet along the railroad tracks to the Park Avenue intersection in Sussex County. The purpose of this force main extension is to allow a future twelve (12) inch diameter Sussex County force main to interconnect with the proposed Artesian force main on Park Avenue. This interconnection will allow Sussex County to utilize the Artesian Beaver Creek WWTP for some of their customers in this area. Please note, that this hearing was held jointly with a separate permitting action regarding Artesian Wastewater Management, Inc.'s Beaver Creek WWTP On-Site Wastewater Treatment and Disposal System Draft Permit Amendment (No. 359014-06).

On January 23, 2020, the Department's Division of Water, Surface Water Discharges Section (SWDS), received an application for a Wastewater Facilities Construction Permit from Artesian Wastewater Management, Inc. (AWMI), pursuant to the requirements of Section 4 of 7 Del. Admin. C. §7201, *Regulations Governing the Control of Water Pollution* to construct approximately eleven thousand seven hundred and thirty-five linear feet (11,735 LF) of twelve (12) inch diameter force main from Park Avenue, Steiner Road, Lewes-Georgetown Highway (Route 9) and connect to their existing twelve (12) inch PVC force main near the Hawthorne Subdivision. The proposed force main would allow for the transmission of wastewater to the Beaver Creek Regional WWTF, which is permitted under State Permit DEN Number 359014-06 for onsite wastewater treatment and disposal.

On February 9, 2020, the Department placed a legal notice for Artesian Wastewater Management, Inc.'s Wastewater Facility Construction Permit Application for the above-referenced force main project in the News Journal, the Delaware State News, and on the Department's website. The Department received requests for additional information and/or requests for a public hearing from Mr. William Klunk, Ms. Therese & Mr. William Blackford, Ms. Mary Jane Dicus and Ms. Diane Goldian, Lane Zangwill, Mr. Jeffery Horn, Mr. Jacob Edwin, Mr. K. John, Ms. Joanne Karlson, and Mr. James Hynes between February 17, 2020 and February 27, 2020.

On October 20, 2020, the Department placed a legal notice for the public hearing on Artesian Wastewater Management, Inc.'s Wastewater Facility Construction Permit Application for this force main project in the News Journal, the Delaware State News, and on the Department's website.

On November 17, 2020 a virtual public hearing was held online through the State of Delaware's Webex portal. During the public hearing, one (1) individual provided comment related to the Artesian Wastewater Management, Inc.'s Wastewater Facility Construction Permit Application. The Department also received written comment from eleven (11) individuals. Written comments included nine (9) letters of support for the project; none of which contain questions or comments requiring follow-up.

This TRM will focus on addressing public comments and questions received from the public that are directly related to Artesian Wastewater Management, Inc.'s Wastewater Facility Construction Permit Application for this force main project. Comments and the SWDS's responses follow.

Verbal comments given at the hearing:

1. Mr. Keith Steck, beginning on transcript page 26, provided several comments to the Department. Comments include:

Comment 1.a: Mr. Steck states, "I was surprised that it did not even mention the length of the project."

Response: *The total length of the project is eleven thousand seven hundred and thirty-five linear feet (11,735 LF) as stated on page three of Artesian's application. The project does*

have several segments. The lengths of those individual segments is broken out in the engineering plans.

Comment 1.b: Mr. Steck stated, “They don’t identify which watershed they are in.”

Response: *Page 1 of Artesian’s application regarding watershed information is left blank; however, watershed information was included with the engineering plans of the application package. Page 1 of Artesian’s engineering plans states that this project is in the Broadkill Watershed.*

Comment 1.c: Mr. Steck stated, “While it says it's going to go to the connection to our existing PVC force main in the Hawthorne Subdivision, well, there is actually two Artesian pipelines there, one going over to the Beaver Creek facility, and one going up to Artesian's facility in Milton, and none of that is clear in this application.”

Response: *Artesian’s application specifically states that this connection will be for wastewater going to the Beaver Creek Regional Wastewater Treatment Facility. No other force mains are referenced or addressed via this application. During Artesian’s presentation at the public hearing, Artesian did communicate the company’s desire to create an interconnected system in Sussex County to build redundancy in its system and allow downtime for maintenance. However, the only interconnection addressed via this force main application is the connection to the Beaver Creek Wastewater Treatment Facility.*

Written Comments:

2. Mr. Keith Steck provided seven pages of comments to the Department. Some of the comments mirrored those which he provided verbally at the hearing. Written comments provided that were not addressed in the above hearing section include:

Comment 2.a: Mr. Steck asks, “How did DNREC know what details to include in a draft pipeline construction permit or a revision to the Artesian operating permit without first ascertaining from the Artesian exactly (1) what the wastewater will consist of and (2) which Artesian pipeline near the Hawthorne community without knowing what’s in the undisclosed wastewater.”

Response: *The makeup of the wastewater is not pertinent to the Wastewater Facility Construction Permit regarding the pipeline. The force main as designed should be able to accommodate sanitary, commercial, or industrial wastes.*

Comment 2.b Mr. Steck asks, “While DNREC claims it has not made a decision one way or the other regarding permits, the mere fact that DNREC has drafted the pipeline permit and a revised Beaver Creek operations permit indicates otherwise. The agency comes across as already knowing what was coming and took action because it had already decided to approve it.

Response: *Prior to holding this hearing staff working on behalf of the Surface Water Discharges Section (SWDS) had reviewed the application and determined that Artesian's application was administratively complete. Staff reviewed Artesian's engineering plans, requested and received additional information from Artesian, and determined the application to be technically complete. Staff then had to review the information and make a tentative recommendation on permit issuance. If the program recommends that a permit could be issued, then the application proceeds to public notice. If upon review the program determines there is not sufficient information to make a permitting recommendation or that the requested activity does not conform to applicable regulations, then the application would be returned to the applicant with a denial or request for additional information and would not proceed to public notice. A tentative recommendation for permit issuance prior to public notice does not guarantee that a permit will be issued. All comments received during the public process must be considered before a final permit decision can be made.*

Public input is an important and requisite part of the permitting process. The public can provide a different perspective or point out faults in the information available, raise issues or concerns not previously addressed, or provide additional information that was not readily available to the SWDS. That public input is then taken into consideration by the SWDS when developing the TRM, by the Hearing Officer when drafting their report, and by the Secretary when making a final determination.

Comment 2.c: **Mr. Steck states, "Moreover, the application instructions clearly state that two items must be submitted prior to the issuance of the permit: Item 6, Verification from the appropriate county or municipal planning authority that the project has the proper zoning approval and Item 7, A letter from the owner/operator confirming it has approved the project, it will take responsibility for treating and disposing of the wastewater and the downstream facilities have the capacity to manage the additional flows without causing or contributing to violations of Delaware's Environmental Protection Act, including not violating NPDES permit. There's no documentation included in this docket's portfolio to support either of these requirements."**

Response: *Since this is an infrastructure project tracking within approved easements, no separate zoning approval is required for this type of project. Artesian does provide a list of easement map numbers, to show their authority to utilize the easements within the parcels through which the force main will run.*

The owner/operator approval letter is not required with the initial application, but is required prior to permit issuance. This permit would not be issued prior to having that letter on file.

Comment 2.d: **Mr. Steck raised concerns about having a joint hearing for two applications. Suggesting that holding separate hearings would help to allay some public concerns, result in more questions, and more complete understanding for the public.**

Response: *Holding joint hearings for related permit applications is common practice, when timing and circumstances allow. The Department will combine public notices and public hearings on related permit matters to allow for a more comprehensive picture of the permitting action, provide for greater transparency in permitting actions across multiple programs, and to allow the Department to more thoroughly address public comment when those comments address a project as a whole rather than limiting Department review and response to one permitting action only. Inclusion of this force main application with the Beaver Creek Regional WWTF's permit amendment provides the public with a clearer picture as to how this permit contribute to wastewater management in the area. If this was an individual hearing only concerning force main construction, comments the public had regarding the operation of the destination wastewater treatment facility would be beyond the scope of the hearing and only addressed in general.*

3. Ms. Shelley Cohen provided two (2) pages of comments to the Department.

Comment 3.a: Ms. Cohen stated, "The online hearing system does not allow the public to speak or ask questions"

Response: *All those who registered to speak were able to make verbal comments at the hearing, and the Hearing Officer left the hearing record open until Wednesday December 2, 2020. All comments received either verbally or in writing are given equal consideration by the Department, are incorporated into the hearing record, and are addressed in the Department's Technical Response Memorandum.*

Comment 3.b: Ms. Cohen also questions the use of a joint hearing.

Response: *Please see the response to question 2.d above.*

Comment 3.c: Ms. Cohen questions why the drawings do not indicate the presence of cleanouts, lift stations for pumps, or compressors.

Response: *No such features exist in this project. Such features likely exist in other portions of this collection system; however, none are included in the portion of the system proposed in this application. Designs for relief valves and other structures present in this project are all detailed in the engineering drawings submitted as part of this application.*

Comment 3.d: Ms. Cohen questions the system's maintenance schedule and what actions would be taken in case of a system failure.

Response: *This application is for a construction permit and is not required to address operational requirements such as maintenance plans and operational contingencies.*

Comment 3.e: Ms. Cohen questions the capacity of the receiving wastewater treatment facility.

Response: *Beaver Creek Wastewater Treatment Facility currently has a flow limitation of 150,000 gallons per day. However, AWMI holds a Construction Permit (No. 295999-01) authorizing the addition of a second treatment train which once brought online will allow the wastewater treatment system to treat an influent flow of 300,000 GPD. AWMI is required to submit record drawings and a completion report for GWDS approve prior to being authorized to increase influent flows to 300,000 GPD. As such, Beaver Creek has the capacity to manage the flow carried by this system.*

Division of Water - Surface Water Discharges Section Recommendation

Artesian's Wastewater Facilities Construction Permit application is complete and the applicable Department regulatory requirements have been met. The Department's SWDS believes all public comments submitted on Artesian's application have been satisfactorily addressed and that the draft Wastewater Facilities Construction Permit is protective of human health and the environment while being consistent with applicable State and Federal regulations.

The SWDS recommends the issuance of Artesian's Wastewater Facilities Construction Permit for this force main construction consistent with the draft permit.



**AUTHORIZATION TO CONSTRUCT UNDER THE
LAWS OF THE STATE OF DELAWARE**

PART I

1. **In compliance with the provisions of 7 Del. C., §6003,**

**Artesian Wastewater Management, Inc.
664 Churchmans Road
Newark, DE 19703**

is authorized to construct facilities consisting of the following:

Approximately eleven thousand seven hundred and thirty-five linear feet (11,735 LF) of twelve (12) inch diameter force main from their existing twelve (12) inch diameter force main at the intersection of the Lewes-Georgetown Highway (Rt. 9) and Gravel Hill Road (Rt. 30), continuing west on Rt. 9 to the Steiner Road intersection, continuing south on Steiner Road approximately one thousand five hundred (1,500) feet to the railroad tracks, and then continuing approximately three thousand five hundred (3,500) feet along the railroad tracks to the Park Avenue intersection in Sussex County. The purpose of this force main extension is to allow a future twelve (12) inch diameter Sussex County force main to interconnect with the proposed Artesian force main on Park Avenue. This interconnection will allow Sussex County to utilize the Artesian Beaver Creek wastewater treatment facility for some of their customers in this area.

The subject project should be in accordance with plans and specifications as described below and limitations, requirements and other conditions set forth in Parts I, II and III hereof.

2. The plans, specifications, municipality standards and other documents submitted with the permit application consist of the following, which are incorporated by reference and made part of this authorization:

Twelve (12) drawings** prepared by Artesian Wastewater Management, titled "Force Main Extension Rt. 9-Sussex County to Hawthorne", dated 11-12-19 and the current Sussex County Standard Specifications for the Design and Construction of Ordinance 38 Projects.

**Drawings include:

Sheet C1 – Cover Sheet

Sheets FM1-FM8 – Force Main Plans, latest rev. 2-25-20

Sheets FM9-FM11 – Notes and Details, latest rev. (2-25-20 FM9, No date FM10 & FM11)

Bryan A. Ashby, Environmental Scientist
Surface Water Discharges Section
Division of Water
State of Delaware Department of Natural Resources
and Environmental Control

Date Signed

3. The liquid waste will be discharged through an existing wastewater collection and transmission system to the Beaver Creek Wastewater Treatment Facility, which discharges treated wastewater via spray irrigation, in accordance with DNREC Groundwater Discharges Section Permit No. 202902-OP.

A. Effluent Limitations on Pollutants Attributable to Industrial Users

The use of the constructed facility is conditioned on meeting all applicable pretreatment standards under 40 CFR, Part 403, or toxic pollutant discharge limitations under Section 307(a) of the Clean Water Act of 1977, PL 95-217.

B. Flow and Usage Limitations

This permit authorizes a daily average discharge of N/A gallons*. The flow in the system shall be measured at least every N/A.

The estimated average daily discharge for the subject project is 300,000 GPD.

* This permit authorizes only the construction of the wastewater collection and conveyance facilities referenced herein.

C. Monitoring and Reporting (When Required)

1. Representative sampling of the volume and nature of the monitored discharge shall be conducted at the request of the Division of Water.

2. Reporting

Monitoring results shall be reported to the:
Delaware Department of Natural Resources and Environmental Control
Division of Water, Surface Water Discharges Section
89 Kings Highway
Dover, DE 19901
302-739-9946

3. Definitions

- a. "Daily average flow" means the total flow during a calendar month divided by the number of days in the month that the facility was operating.
- b. "Daily maximum flow" means the highest total flow during any calendar day.
- c. "Daily Peak Flow" means the flow which can be safely transported within the sewage system without causing an overflow or a backup into the building(s) or residence(s).
- d. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.
- e. "Measured flow" means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

- f. "Estimate" means a value to be based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The date, exact place and time of sampling or measurement;
- b. The person(s) who performed the sampling and/or measurement;
- c. The date(s) and time(s) analysis was performed;
- d. The individual(s) who performed each analysis;
- e. The analytical technique(s) or method(s) used;
- f. The results of each analysis; and
- g. Appropriate quality assurance information.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, all records of instrument calibration and maintenance and all charts from continuous monitoring instruments, shall be retained for three (3) years. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

6. Test Procedures

Test procedures for the analysis of pollutants shall conform to the applicable test procedures identified in 40 CFR, Part 136, unless otherwise specified in this permit.

END OF PART I

PART II

A. Management Requirements

1. Duty to Comply

The permittee must comply with the terms and conditions of this permit. Failure to do so constitutes a violation of this permit, which is grounds for enforcement and the imposition of penalties as provided in 7 Del.C., Chapter 60, grounds for permit termination or loss of authorization to discharge or operate pursuant to this permit, grounds for permit revocation and reissuance or permit modification, or denial of a permit renewal application.

2. Notification

a. Changes in Authorized Activities

The permittee shall notify the Department of any proposed change in the activity authorized herein, of any proposed substantive change in the operation of the facility or facilities authorized herein, or of any anticipated facility expansions, production increases, or process modifications. Notification is required only when such alteration, addition or change may justify the inclusion of conditions that are absent or different from those specified in this permit. This includes, for example, the construction of additional wastewater collection, transmission or treatment facilities and changes which will result in new, different, or increased discharges of pollutants. Following such notice, the Department may require the submission of a new permit application and this permit may be reopened and modified to address the proposed changes.

b. Noncompliance

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this permit, the permittee shall provide the Department with the following information, in writing, within five (5) days of becoming aware of such condition:

A description of the discharge and cause of noncompliance; and

The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all collection and treatment facilities and systems (and related appurtenances) installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective management, adequate operator staffing and training and adequate laboratory process controls, including appropriate quality assurance procedures.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the State resulting from noncompliance with this permit, including such accelerated or

additional monitoring as necessary to determine the nature and extent of the noncomplying discharge.

5. Bypassing

Any bypass or intentional diversion of waste streams from the facilities authorized by this permit, or any portion thereof, is prohibited, except (i) where unavoidable to prevent loss of human life, personal injury or severe property damage, or (ii) where excessive storm drainage or run-off would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Department, in writing, of each such diversion or bypass.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the surface water or groundwater.

B. Responsibilities

1. Within 90 days following the completion of construction, the permittee shall submit to the Department an "as-built" set of plans of the facility or facilities constructed, bearing the seal and signature of a licensed Professional Engineer registered in the State of Delaware.

2. Right of Entry

The permittee shall allow the Secretary of the Department of Natural Resources and Environmental Control, or his authorized representative(s), upon the presentation of credentials:

- a. To enter upon the permittee's premises for inspection of any records, flow measurements, construction or other activity authorized by this permit or any condition required under the terms of this permit; and
- b. At reasonable times, to have access to and to copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and
- c. To sample any discharge.

3. Transferability

This permit is transferable with the Department's consent, provided that an intention to transfer accompanied by a copy of the permit is provided to the Department, signed by both the transferor and the transferee at least ten (10) days prior to the actual transfer

4. Availability of Reports

All reports submitted with the application and those reports required under the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013. Any person who causes or contributes to the discharge of a pollutant into State waters either in excess of any conditions specified in this permit or in absence of a specific permit condition shall report such an incident to the Department required under 7 Del. C. §6028.

5. Permit Modification

This permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized activity; or
- d. Information that the permitted activity poses a threat to human health or welfare, or to the environment.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under 7 Del. C., Chapter 60.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable. If any provision of this permit is held invalid, or if the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

END OF PART II

PART III

A. Special Conditions

1. This permit authorizes only the construction of the wastewater facilities and related work referenced herein.
2. If well pointing is required during construction, the wells must be installed by a licensed well driller, and a permit to construct such wells must first be obtained from the Well Permits Branch of the Water Supply Section.
3. All construction shall be in agreement with plans and specifications submitted under this project and approved by the Department of Natural Resources and Environmental Control.
4. All construction shall be in accordance with Ten States Standards and other applicable local utility construction specifications and standards.
5. Connections or additions to the proposed system, other than those proposed on the plans, will not be allowed without prior approval from the Department.

END OF PART III



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES &
ENVIRONMENTAL CONTROL
DIVISION OF WATER
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

Groundwater Discharges Section

Telephone: (302) 739-9948

MEMORANDUM

TO: Lisa Vest, Hearing Officer, Office of the Secretary

THROUGH: Virgil Holmes, Director, Division of Water (DW)
Jennifer Roushey, Environmental Program Administrator, DW

FROM: John Rebar Jr., Environmental Program Manager I Groundwater Discharges Section (GWDS)

RE: **Technical Response Memorandum - Response to Comments Received during the Public Comment Period and the November 17, 2020 Public Hearing (Docket # 2020-P-W-0026) on the proposed Draft On-Site Wastewater Treatment and Disposal System Operations Permit (No. 359014-06) Amendment for the Beaver Creek Regional Wastewater Treatment Facility owned and operated by Artesian Wastewater Management, Inc. and located near the intersection of State Road 5 and State Road 9, Sussex County, Delaware (tax map # 2-35-30.00-24.00 & 32.00)**

DATE: June 14, 2021 Revised: December 17, 2021

On December 17, 2021, the TRM was revised to offer clarity between the use of the word “amendment” and “modification.” Amendment refers to the Permit document while modification is referencing physical changes to processes or systems.

This Technical Response Memorandum (TRM) was prepared at the request of the presiding Hearing Officer to assist in the completion of the Hearing Officer’s Report to the Secretary of the Delaware Department of Natural Resources and Environmental Control (the Department). The TRM was prepared by the Groundwater Discharges Section (GWDS) and provides the information necessary to inform the final decision on the issuance of the proposed On-Site Wastewater Treatment and Disposal System (OWTDS) Operations Permit (No. 359014-06) Amendment for the Beaver Creek Regional Wastewater Treatment Facility (WWTF). The Beaver Creek Regional WWTF is owned and operated by Artesian Wastewater Management, Inc. and is located near the intersection of State Road 5 and State Road 9, Sussex County, Delaware (tax map # 2-35-30.00-24.00 & 32.00). The Surface Water Discharges Section (SWDS) will prepare an additional TRM to address comments received on Artesian Wastewater Management, Inc.’s Wastewater Facilities Construction Application and Draft Permit (WPCC 3007/20) also proposed to be issued during the November 17, 2020 Public Hearing (Docket # 2020-P-W-0026).

On February 9, 2018, the GWDS issued a State of Delaware OWTDS Operations Permit (No. 359014-06) to Artesian Wastewater Management, Inc. (AWMI) to operate the Beaver Creek Regional WWTF for the treatment and disposal of sanitary waste in accordance with Sussex County Conditional Use Ordinance No. 1992 (Appendix 1). The permit is currently in effect and includes effluent limitations, operational, monitoring and reporting requirements and conditions designed for the protection of public health and the environment as required by 7 Del. Admin. C. §7101 *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (the Regulations).

The AWMI Beaver Creek Regional WWTF consists of an influent screen/grit removal system, a dual Aqua-Aerobic Sequencing Batch Reactor treatment system (SBR1 and SBR2), a screened effluent equalization basin, a chlorine contact tank for disinfection, an optional secondary digester tank, and six (6) Rapid Infiltration Basins (RIBs) for final disposal of treated wastewater (effluent). The Operations Permit limits the daily monthly average influent flow to 150,000 gallons per day (GPD) until SBR 2 and the secondary digester are brought online at which point the facility is authorized to treat an influent flow of 300,000 GPD.

On January 23, 2020, the SWDS received an application from AWMI for the proposed construction of approximately eleven thousand seven hundred and thirty-five linear feet (11,735 LF) of twelve (12) inch diameter force main from their existing twelve (12) inch diameter force main at the intersection of the Lewes-Georgetown Highway (Rt. 9) and Gravel Hill Road (Rt. 30) to the Park Avenue intersection in Sussex County. The purpose of this force main extension is to allow a future twelve (12) inch diameter Sussex County force main to interconnect with the proposed Artesian force main on Park Avenue. This interconnection will allow Sussex County to utilize the AWMI Beaver Creek Regional WWTF for some of their customers in this area. Pursuant to Section 6.5.3.3 of the Regulations, the GWDS determined that an amendment of the Beaver Creek Regional WWTF Operations Permit was required to incorporate enhanced notification and reporting requirements associated with this interconnection. A draft OWTDS Operations Permit Amendment for the AWMI Beaver Creek Regional WWTF was prepared.

A virtual public hearing was held on the SWDS force main construction application and proposed draft permit and the GWDS proposed draft permit amendment on Tuesday, November 17, 2020, at 6:00 PM. To allow the public ample time to review the application, draft permits, and provide comment, the Hearing Officer left the hearing record open until Wednesday December 2, 2020. The Department received both letters of support for the project and proposed draft permits and comments from two individuals highlighting various concerns. In many cases, comments were provided on the same issues; in others, the comments were unrelated. During the GWDS's review of the written comments to prepare this *response to comments* document, the GWDS paraphrased and grouped similar comments together. In addition, the GWDS received written comments on the proposed draft permit amendment from AWMI in a letter dated November 12, 2020 (Appendix 2). Comments and the GWDS's responses follow.

1. Comment: What is the environmental impact?

Response: Wastewater is composed a wide range of physical, chemical, and biological constituents. The goal of wastewater treatment is the removal of specific constituents of concern for the protection of public health and the environment. The primary constituents of concern in wastewater include total suspended solids (TSS), pathogens, biodegradable organics, nutrients (i.e., nitrogen and phosphorus) and other dissolved inorganics, heavy metals, and priority pollutants (i.e., carcinogenic organic and inorganic compounds). Wastewater treatment systems are designed to remove specific constituents depending on the source of the wastewater (i.e., residential/municipal, industrial, agricultural, etc.) and point of discharge (surface water, groundwater, public or agricultural reuse, etc.).

The GWDS is mandated by Section 3.13 of the Regulations to ensure that all permitted on-site wastewater treatment and disposal systems are “operated and maintained so as not to create a public health hazard or cause water pollution.” To achieve this objective, Section 6.5.3.2.3 of the Regulations authorizes the GWDS to establish specific permit conditions necessary for the protection of the environment and the public health. These conditions are based on a variety of site-specific characteristics associated with a facility. This can include influent and effluent water quality, volume of water treated, wastewater distribution and disposal methods, and potential for adverse environmental impacts to groundwater and surface water resources. To comply with these Regulations, the GWDS issued a State of Delaware OWTDS Operations Permit (No. 359014-06) to AWMI to operate the Beaver Creek Regional WWTF for the treatment and disposal of sanitary waste in accordance with Sussex County Conditional Use Ordinance No. 1992. This permit is effective and includes effluent limitations along with operational, monitoring, and reporting conditions designed to protect public health and the environment.

Total Nitrogen

Treated effluent discharged from the wastewater treatment system is required to achieve an annual average total nitrogen concentration of 10 mg/L which is in-line with Federal Drinking Water Standards and therefore protective of human health and environment.

Effluent Water Quality

Treated effluent discharged from the Beaver Creek wastewater treatment system is required to meet the following water quality standards (Table 1) which are designed for sites where access by the public is controlled and the site is only accessed by operational personnel.

Table 1: Effluent Water Quality

Parameter	Daily Permissible Average Concentration
5-Day Biochemical Oxygen Demand	30 mg/L

Fecal Coliform	200 colonies/100 mL
Total Suspended Solids	30 mg/L
Total Phosphorous	7.85 mg/L

To ensure proper treatment the permit requires routine influent and effluent wastewater monitoring (Table 2 and Table 3).

Table 2: Influent Monitoring Requirements

Parameter	Unit of Measurement	Monitoring Frequency	Sample Type
Flow	Gallons/Day	Continuous	Recorded
BOD ₅	mg/L	2 x per month	Grab
TSS	mg/L	2 x per month	Grab
Total Nitrogen	mg/L	2 x per month	Grab
Ammonia Nitrogen	mg/L	Monthly	Grab
Nitrate/Nitrite as Nitrogen	mg/L	Monthly	Grab
pH	S.U.	3 x per week	Grab
Total Phosphorus	mg/L	Monthly	Grab
Chloride	mg/L	Quarterly	Grab

Table 3: Effluent Monitoring Requirements

Parameter	Unit Measurement	Monitoring Frequency	Sample Type
Flow	Gallons/Day	Continuous	Recorded
BOD ₅	mg/L	2 x per month	Composite
TSS	mg/L	2 x per month	Composite
TDS	mg/L	Quarterly	Grab
Fecal coliform bacteria	Col/100 ml	Quarterly	Grab
Total Nitrogen	mg/L	2 x per month	Composite
Ammonia Nitrogen	mg/L	Monthly	Composite
Nitrate/Nitrite as Nitrogen	mg/L	Monthly	Composite
pH	S.U.	3 x per week	Grab
Total Phosphorus	mg/L	Monthly	Composite
Chloride	mg/L	Quarterly	Composite
Sodium	mg/L	Quarterly	Composite

Groundwater Protection

The GWDS issues permits that are designed to protect groundwater quality by including requirements to control the amount of nitrogen (i.e., nitrates as nitrogen) and other contaminants discharged in treated wastewater (effluent).

The current permit requires the treated effluent discharged from the wastewater treatment system to meet an annual average total nitrogen (the sum of nitrate, nitrite, ammonia, and organic nitrogen) concentration of 10 mg/L. This limitation is derived from the Federal Drinking Water Standard and is, therefore, the protective of groundwater resources.

The current permit also authorizes the use of rapid infiltration basins (RIBs) for the proper disposal of treated effluent. RIBs are earthen basins designed for a repetitive cycle of flooding, infiltration/percolation, and drying of treated wastewater. AWMI’s Beaver Creek facility utilizes six RIBs for disposal of treated effluent. To ensure that the discharge is not impacting groundwater quality the current permit requires a groundwater monitoring well network (currently four wells) to ensure that wastewater disposal via the RIBs is not having an adverse impact on groundwater quality. The following parameters are required to be sampled in Beaver Creek’s monitoring wells (Table 4).

Table 4: Monitoring Well Sampling Requirements

Parameter	Unit Measurement	Measurement Frequency	Sample Type
Ammonia as Nitrogen	mg/L	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Depth to Water Table	hundredths of a foot	Quarterly	Field Test
Dissolved Oxygen	mg/L	Quarterly	Field Test
Fecal Coliform	Col/100mL	Quarterly	Grab
Total Coliforms	Col/100mL	Quarterly	Grab
Nitrate + Nitrite as Nitrogen	mg/L	Quarterly	Grab
pH	S.U.	Quarterly	Field Test
Sodium	mg/L	Quarterly	Grab
Specific Conductance	µS/cm	Quarterly	Field Test
Temperature	°C	Quarterly	Field Test
Total Dissolved Solids	mg/L	Quarterly	Grab
Total Nitrogen	mg/L	Quarterly	Grab
Total Phosphorus	mg/L	Quarterly	Grab

In addition, the current permit requires the measurement of the depth of the groundwater table on a quarterly basis. In accordance with Section 6.5.3.2.1.4 of the Regulations, if the groundwater mound created by the added infiltration reaches within 2-ft of the ground surface of the RIBs the discharge to that RIB must cease until the groundwater recedes to acceptable levels.

The current permit requires multiple layers of monitoring to ascertain treatment system functionality and identify any increasing trends of wastewater constituents in groundwater. In accordance with Section 3.20 of the Regulations, if trends of increasing water quality concentrations, system failures, or groundwater impacts are identified, the permit includes contingency language and requirements that the Permittee notify the GWDS and prepare and implement a Corrective Action Plan to address the violations.

Permit Amendment

The proposed Draft Operations Permit Amendment for AWMI's Beaver Creek Regional WWTF does not change or remove any of the effluent limitations, operational, monitoring or reporting conditions or requirements discussed above. The amendment only proposes the addition of several special conditions associated with the interconnection proposed in the AWMI's Wastewater Facilities Construction Application and Draft Permit (WPCC 3007/20). This includes: 1) notifications and authorizations associated with the already approved influent flow of 300,000 GPD, 2) assurances that only influent flows authorized by the Sussex County Conditional Use Ordinance No. 1992 will be treated and disposed at the Beaver Creek facility, and 3) limitations on influent wastewater strength authorized to be received at the Beaver Creek facility for treatment and disposal.

The GWDS believes that the effluent limitations, operational, monitoring, and reporting conditions and requirements included in the current permit and the special conditions associated with the proposed Sussex County interconnection proposed in the draft permit amendment are protective of public health and the environment and will not have a significant environmental impact.

2. **Comment:** What are the laws or rules that govern the types of waste and capacity for wastewater treatment plants? What is the discharge volume for the Beaver Creek facility 150,000 gpd or 300,000 gpd?

Response: The Groundwater Discharges Section issues construction and operational permits in accordance with 7 Del. Admin. C. §7101 *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (the Regulations). The permits are prepared based on applications and supplemental documents such as Design Engineer Reports, Soil Investigation Reports, Hydrogeological Suitability Reports, Construction Plans and Technical Specifications, etc. These documents are prepared by qualified experts in engineering, soil science, hydrogeology, and wastewater treatment system operations. Wastewater treatment systems and facilities are specifically designed for the types of waste and volume of wastewater needed to be treated.

Requirements for the planning and design documents along with water quality limitations, operational, monitoring, and reporting are included in the Regulations.

On February 9, 2018, the GWDS issued a State of Delaware OWTDS Operations Permit (No. 359014-06) to AWM I to operate the Beaver Creek Regional WWTF for the treatment and disposal of sanitary waste in accordance with Sussex County Conditional Use Ordinance No. 1992. The permit is currently in effect and limits the daily monthly average influent flow to 150,000 GPD. However, AWM I holds a Construction Permit (No. 295999-01) authorizing the addition of a second treatment train which once brought online will allow the wastewater treatment system to treat an influent flow of 300,000 GPD. AWM I is required to submit record drawings and a completion report for GWDS approve prior to being authorized to increase influent flows to 300,000 GPD.

3. **Comment:** What is the source and characteristics (wastewater strength) of the wastewater transported via the force main to the Beaver Creek Regional WWTF? Is there a significant industrial source?

Response: The Beaver Creek Regional WWTF is authorized to receive and treat sanitary waste in accordance with Sussex County Conditional Use Ordinance No. 1992 (Appendix 1). Commercial and industrial contributions to municipal wastewater composition is highly variable and the only way to characterize that contribution is through wastewater sampling (Metcalf and Eddy, 2003). Therefore, to address the public's concerns regarding influent wastewater strength the GWDS is recommending the addition of two special conditions requiring the sampling of inorganic and organic constituents on an annual basis. Analytical results will be submitted in the annual report due February 28th each year.

Draft Operations Permit Part III A Subpart s (New Condition Language)

On an annual basis, the Permittee shall collect a 24-hour flow weighted composite sample (except where noted) of treated wastewater from the final treatment process and analyze the sample for the following inorganic constituents:

<i>aluminum</i>	<i>copper</i>	<i>mercury</i>
<i>arsenic</i>	<i>cyanide</i>	<i>pH (instantaneous)</i>
<i>barium</i>	<i>fluoride</i>	<i>nickel</i>
<i>boron</i>	<i>iron</i>	<i>selenium</i>
<i>cadmium</i>	<i>lead</i>	<i>silver</i>
<i>chromium</i>	<i>manganese</i>	<i>sulfate</i>
<i>cobalt</i>	<i>molybdenum</i>	<i>zinc</i>

Samples shall be properly prepared, preserved, transported, and analyzed in accordance with the methods approved by the Department. Analytical results shall be submitted to the Groundwater Discharges Section in the annual monitoring report due by February 28th each year.

Draft Operations Permit Part III A Subpart t (New Condition Language)

On an annual basis, the Permittee shall collect a grab sample of treated wastewater from the final treatment process and analyze the sample for the following organic constituents:

<i>benzene</i>	<i>PAHs: total naphthalene plus monomethylnaphthalenes</i>
<i>benzo-a-pyrene</i>	<i>Phenols</i>
<i>carbon tetrachloride</i>	<i>toluene</i>
<i>chloroform</i>	<i>1,1,2,2-tetrachloroethane</i>
<i>1,1-dichloroethane</i>	<i>1,1,2,2-tetrachloroethylene (PCE)</i>
<i>1,2-dichloroethane (EDC)</i>	<i>1,1,1-trichloroethane</i>
<i>1,1-dichloroethylene (1,1-DCE)</i>	<i>1,1,2-trichloroethane</i>
<i>ethylbenzene</i>	<i>1,1,2-trichloroethylene (TCE)</i>
<i>ethylene dibromide (EDB)</i>	<i>vinyl chloride</i>
<i>methylene chloride</i>	<i>xylenes (total)</i>

Samples shall be properly prepared, preserved, transported, and analyzed in accordance with the methods approved by the Department. Analytical results shall be submitted to the Groundwater Discharges Section in the annual monitoring report due by February 28th each year.

- 4. Comment:** Are additional certified operators needed for the additional flow and increased wastewater strength?

Response: The classification of wastewater facilities and operator certification levels are governed by 7 Del. Admin. C. §7204 *Regulations for Licensing Operators of Wastewater Facilities*. A wastewater treatment facility is classified based on a point system which takes into consideration the volume of wastewater treated, disposal system, the complexity of the wastewater treatment system, biosolids handling, disinfection, and other operational and administrative requirements. Currently, the Beaver Creek Regional WWTF is classified at a Class III facility requiring a Class III Operator in Direct Responsible Charge. The Beaver Creek facility is currently managed by a Class IV Operator. Therefore, the facility is properly operated by a qualified professional.

- 5. Comment:** How will a system failure be handled?

Response: Part II A.1 of the draft permit amendment requires all structures, systems, and equipment used for treatment control and monitoring be properly maintained and operated as efficiently as possible. Proper operation and maintenance can include but, is not limited to, effective performance based on designed facility removals, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.

Part II A.3 of the draft permit amendment requires that if, for any reason, the Permittee does not comply with or will be unable to comply with any limitations specified in the Permit, the Permittee will contact the Groundwater Discharges Section within 24 hours of

the non-compliance issue occurring. In addition, the Permittee is required to submit the following information within five (5) days.

- 1) A description of, and cause of non-compliance with any permit limitation or condition
- 2) The period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the non-complying condition
- 3) Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance

In the event of a spill, leaks, or other accidental release, the Permittee is required to follow 7 Del. C. Chapter 60 § 6028 which states (in part) that any individual (i.e., permittee) who causes or contributes to an environmental release (i.e., spill) of a pollutant into surface water or groundwater or on land, must report such an incident to the Department as soon as possible and activate their emergency site plan. In addition, the following information is required to be reported to the Department.

- 1) The facility name and location of release.
- 2) The chemical name or identity of any substance involved in the release.
- 3) An indication of whether the substance is an extremely hazardous substance.
- 4) An estimate of the quantity of any such substance that was released into the environment.
- 5) The time and duration of the release.
- 6) The medium or media into which the release occurred.
- 7) Any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for exposed individuals.
- 8) Proper precautions to take because of the release including evacuation.
- 9) The names and telephone number of the person or persons to be contacted for further information.
- 10) Such other information as the Department may require.

Any corrective actions performed or proposed associated with any non-compliance event or spill will be reviewed and approved by the Department and additional corrective actions, investigations, increased monitoring, or mitigation activities may be required.

Comments Provided by the Applicant, Artesian Wastewater Management Inc.:

On November 12, 2020, the GWDS received AWMi's comments on the proposed Draft Operations Permit Amendment. AWMi's comments focused on the special conditions associated with the proposed Sussex County interconnection. Specifically, AWMi's comments identified condition language or requirements that were unclear, or not in-line with current operational practices or project status. The GWDS agrees with AWMi that additional clarification and condition language and/or requirements revision is needed. The following condition revisions are recommended. A revised draft permit is attached (Appendix 3).

Draft Operations Permit Part III A Subpart m (Original Language)

Once the flow to the WWTP reaches 80% of the permitted treatment capacity of 150,000 gpd, the permittee must submit written notification to the Department. The written notification must include a work plan for upgrades to be made to the WWTP to receive additional flow. The permittee must submit a construction permit application, plans and specifications and a Design Engineer Report with applicable fees if the upgrades have not been permitted or there are changes to the previously permitted design.

Comment: Authorization for construction of improvements that would increase the capacity of Beaver Creek Regional WWTP from 150,000 gallons per day (gpd) to 300,000 gpd has previously been granted under Construction Permit No. 295999-01, Operations Permit No. 359014-06 and DNREC Construction Authorization No. 0929. Therefore, this condition is not required.

Response: The GWDS agrees that a new Construction Permit is not required for wastewater treatment system upgrades needed to increase the facility's capacity from 150,000 gpd to 300,000 gpd. However, the GWDS does require the submission of additional information prior to the facility receiving over 150,000 gpd of influent flow. This was the intent of the original condition. Therefore, the GWDS recommends the following revision.

Draft Operations Permit Part III A Subpart m (Revised Language)

Prior to the facility receiving over 150,000 gpd of influent flow, the Permittee shall complete all required upgrades identified in Construction Permit No. 295999-01, Operations Permit No. 359014-06 and DNREC Construction Authorization No. 0929 and submit to the Department updated Record Drawings and a Certificate of Completion stating that all necessary improvements for increasing the rated capacity of the Beaver Creek Regional WWTP to 300,000 gpd have been completed. Upon review/approval of submitted documents, the Department shall authorize the increased influent flow.

Draft Operations Permit Part III A Subpart n (Original Language)

Any flow above the permitted treatment capacity of 150,000 gpd shall not be permitted until the construction is complete and an operating permit has been issued or amended by the Department for the increase in flow.

Comment: AWMI suggests requiring the submission of a formal request for authorization for Beaver Creek Regional WWTF to begin receiving up to 300,000 gpd of raw influent flow along with the updated Record Drawings and the Certificate of Completion. The GWDS agrees with this suggestion which was the intent of the original condition. Please note that this authorization may be issued in the form of a letter, minor permit amendment, or other regulatory instrument. Therefore, the GWDS recommends the following revision.

Draft Operations Permit Part III A Subpart n (Revised Language)

The Permittee shall submit to the Department a formal request for authorization to begin receiving up to 300,000 gpd of raw influent for treatment and disposal at the Beaver Creek Regional WWTF along with updated Record Drawings and a Certificate of Completion to verify the completion of WWTF upgrades. No increase in influent volume beyond 150,000 gpd shall be accepted by AWMI at the Beaver Creek Regional WWTF until authorized by the Department.

Draft Operations Permit Part III A Subpart p (Original Language)

Connections to the WWTF shall be from a combination of developments located within the Conditional Use Approval granted by Sussex County. The permittee must seek approval from Sussex County and the Department prior to the addition of connections. The permittee must submit a letter of approval to the Department for review and approval, from Sussex County that indicates the Engineering Department approves the permittee to use the Beaver Creek Regional WWTF to serve the proposed connections.

Comment: AWMI is only authorized to provide service to parcels for which it has been granted a CPCN by the Delaware Public Service Commission. Since, both the Department and Sussex County receive notification of all CPCN applications no further notification by the AWMI should be required. Furthermore, the flow treated at Beaver Creek WWTP shall only be from sources authorized by the Conditional Use Approval granted by Sussex County for the Beaver Creek facility. Flow which does not meet these criteria cannot be treated at the Beaver Creek WWTP by AWMI.

Response: The GWDS acknowledges that only flows from sources authorized by Sussex County Conditional Use Ordinance No. 1992 are authorized to be received by AWMI's Beaver Creek Regional WWTF for treatment and disposal. In addition, the GWDS also receives CPCN application notifications. However, neither the Sussex County conditional use approval nor the CPCN applications provide the GWDS with sufficient detail to ensure a rigorous understanding of AWMI and Sussex County agreements, interconnections, and influent flow sources/areas. This more detailed information is also needed for public transparency. Therefore, the GWDS is seeking additional notification and detailed narrative information of how conditional use approvals and CPCN applications fit into the bigger regional sewage picture. However, the GWDS agrees that additional clarifying language is required. Therefore, the GWDS recommends the following revision.

Draft Operations Permit Part III A Subpart p (Revised Language)

The Permittee is only authorized to provide service to parcels for which it has been granted a CPCN by the Delaware Public Service Commission. Additionally, the Beaver Creek Regional WWTF is only authorized to treat influent flow from sources authorized by the Conditional Use Approval granted by Sussex County. The Permittee shall notify the GWDS when CPCN is granted by the Delaware Public Service Commission or when Condition Use Approval is granted by Sussex County. The notification shall include detailed narrative information regarding agreements, interconnections, and influent flow sources/areas along with information of how conditional use approvals and CPCNs fit into the bigger regional sewage management plan.

Draft Operations Permit Part III A Subpart q (Original Language)

No industrial or commercial wastewater may be discharged the Beaver Creek Regional WWTF unless the Department has reviewed and approved the discharge in writing through a wastewater management plan. Any additions or changes to a wastewater management plan must be approved by the Department prior to the connection.

Comment: AAMI suggests that wastewater influent chemical characterization, regardless of the influents source, is the key consideration regarding maintaining a regional wastewater treatment system and achieving permit effluent limitations and protecting public health and the environment. AAMI believes that it can properly treat wastewater with influent concentrations of 80 mg/L TN, 400 mg/L BOD₅, and 500 mg/L TSS and is willing to require pretreatment from any source exceeding those concentrations.

Response: The GWDS agrees that routinely determining the chemical composition of influent wastewater is a key process control technique essential for the proper operation of a regional wastewater treatment facility. Table 5 from Metcalf and Eddy 2003 provides the typical chemical composition of untreated domestic (includes commercial, residential, and municipal) wastewater. Based on Table 5 and AAMI’s proposed pretreatment limits, the GWDS is satisfied that while the influent received at the Beaver Creek facility may be high strength it is not expected to have a significant industrial component. Please note as discussed previously, the GWDS is recommending additional inorganic and organic sampling to ensure influent wastewater is properly characterized. Therefore, the GWDS agrees with AAMI’s proposal to monitor TN, BOD₅, and TSS (along with TDS) and submit analytical results to the GWDS in the monthly monitoring reports. If two consecutive months of data indicates influent TN, BOD₅, and TSS exceeds the proposed concentration values, the Permittee will be required to investigate and require pretreatment from any source exceeding those concentrations.

Table 5. Typical Composition of Untreated Domestic Wastewater

Parameter	Unit	Concentrations		
		Low Strength	Medium Strength	High Strength
BOD	mg/L	110	190	350
TDS	mg/L	270	500	860
TN	mg/L	20	40	70
TSS	mg/L	120	210	400

Draft Operations Permit Part III A Subpart q (Revised Language)

The Permittee shall collect an influent grab sample twice per month for BOD₅, TDS, TSS, and TN. If influent concentrations exceed 80 mg/L TN, 400 mg/L BOD₅, and 500 mg/L TSS for two consecutive months, the Permittee shall perform an investigation and require pretreatment from any source exceeding those concentrations.

Groundwater Discharges Section Recommendation

The GWDS recommends the approval of the On-Site Wastewater Treatment and Disposal System Operations Permit Amendment (Permit No. 359014-06) for the Beaver Creek Regional Wastewater Treatment Facility owned and operated by Artesian Wastewater Management, Inc. and located near the intersection of State Road 5 and State Road 9, Sussex County, Delaware (tax map # 2-35-30.00-24.00 & 32.00).

The Operations Permit Amendment will require enhance notification, monitoring and reporting requirements associated with the proposed Sussex County interconnect. No other conditions or requirements are modified or removed. The Operations Permit Amendment requires treated effluent discharged from the wastewater treatment system to achieve an annual average total nitrogen concentration of 10 mg/L which is in-line with Federal Drinking Water Standards and therefore protective of human health and environment. In addition, the permit will require extensive water quality monitoring through influent and effluent monitoring, and the use of monitoring wells allowing the GWDS to evaluate the condition of groundwater resources at the facility to assure permitted treated effluent disposal is not having a negative impact on groundwater quality. In the event trends of increasing concentrations and/or impacts are observed, the permittee will be required take all necessary actions to eliminate and correct any adverse impact on public health or the environment resulting from permit non-compliance.

Given this, the GWDS has a high degree of confidence that the On-Site Wastewater Treatment and Disposal System Operations Permit Amendment proposed for the Beaver Creek Regional Wastewater Treatment Facility will be protective of public health and the environment. As such, the GWDS recommends the issuance of the permit amendment.

Appendix 1

359014-03

ORDINANCE NO. 1992

With Conditions

AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR A REGIONAL WASTEWATER FACILITY TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN BROADKILL HUNDRED, SUSSEX COUNTY, CONTAINING 10.76 ACRES, MORE OR LESS

WHEREAS, on the 29th day of February 2008, a conditional use application, denominated Conditional Use No. 1789 was filed on behalf of Artesian Water Company, Inc.; and

WHEREAS, on the 22nd day of May 2008, a public hearing was held, after notice, before the Planning and Zoning Commission of Sussex County and on the 12th day of June 2008, said Planning and Zoning Commission recommended that Conditional Use No. 1789 be approved with conditions; and

WHEREAS, on the 10th day of June 2008, a public hearing was held, after notice, before the County Council of Sussex County and the County Council of Sussex County determined, based on the findings of facts, that said conditional use is in accordance with the Comprehensive Development Plan and promotes the health, safety, morals, convenience, order, prosperity and welfare of the present and future inhabitants of Sussex County, and that the conditional use is for the general convenience and welfare of the inhabitants of Sussex County.

NOW, THEREFORE,

THE COUNTY OF SUSSEX HEREBY ORDAINS:

Section 1. That Chapter 115, Article IV, Subsection 115-22, Code of Sussex County, be amended by adding the designation of Conditional Use No. 1789 as it applies to the property hereinafter described.

Section 2. The subject property is described as follows:

ALL that certain tract, piece or parcel of land, lying and being situate in Broadkill Hundred, Sussex County, Delaware, and lying east of Route 5 on both sides of Meadow Creek Drive (a private road) and 2,000 feet north of Route 9 at Harbeson and being more particularly described in the following legal description prepared by McCrone, Inc.

This Ordinance shall take effect immediately upon its adoption by majority vote of all members of the County Council of Sussex County, Delaware.

This Ordinance was adopted subject to the following conditions:

- 1. The proposed regional wastewater facility and its disposal systems shall be reviewed and approved by DNREC and shall be designed and constructed in accordance with all applicable Federal, State and County requirements, including those mandated by DNREC and other agencies having jurisdiction over same.**
- 2. The treatment plant buildings shall appear to be agricultural buildings.**
- 3. All improvements for collection, treatment and disposal of sanitary waste shall be constructed and maintained in accordance with the requirements, if any, of the Engineering Department, DNREC, and any other governmental agency with jurisdiction over the use of the site, or any modification thereto.**
- 4. There shall be forested buffers of at least 30 feet from all property lines. Any lagoons, rapid infiltration basins or similar structures shall be located at least 100-feet from any dwellings.**
- 5. One unlighted sign shall be permitted on the site to identify the operator of the system.**
- 6. With the exception of emergency generators that may be located on the site, all of the equipment needed in the operation of the facility shall be located indoors. The generators, if any, shall be housed in enclosures to reduce noise.**
- 7. Any security lighting shall be screened so that it does not shine onto neighboring properties or County roads.**
- 8. A regional plan shall be submitted to the Engineering Department that shows all of the areas and/or subdivisions that will be served by the facility. This shall be updated on an annual basis as additional properties or subdivisions are added. The Plan and its updates shall include a list of EDUs planned to be served to ensure that adequate capacity exists.**
- 9. The facility shall not receive wastewater from any property or parcel that is located within a Sussex County Sewer Planning Area or Sewer District, unless approval is given by the Engineering Department.**

Permit

10. **The Final Site Plan shall be subject to the review and approval of the Planning and Zoning Commission. The Final Site Plan shall contain a landscape plan showing all vegetation and buffers for the project.**

I DO HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF ORDINANCE NO. 1992 ADOPTED BY THE SUSSEX COUNTY COUNCIL ON THE 12TH DAY OF AUGUST 2008.


ROBIN A. GRIFFITH
CLERK OF THE COUNCIL

The Council found that the Conditional Use was appropriate legislative action based on the following findings of fact:

1. **This application is for a regional wastewater facility on 10.76 acres of land lying on the east side of Route 5 on both sides of Meadow Creek Drive and approximately 2,000 feet north of State Route 9 near Harbeson, Broadkill Hundred, Sussex County, Delaware.**
2. **The site is not located in a proposed or current County operated and maintained sanitary sewer district and is not capable of being annexed into a County sewer district at this time; however, the Applicant will be required to submit its regional service plan to the County Engineering Department showing the areas and subdivisions to be served and shall update and resubmit the plan on an annual basis. The regional treatment facility shall not receive and treat wastewater from any property or parcel that is located within a Sussex County sewer planning area or sewer district.**
3. **The wastewater treatment facility currently exists at the proposed site within the Trails of Beaver Creek subdivision but Conditional Use approval was applied for in order to allow service to be extended to the regional area that is not currently served by a County sewer district.**
4. **The Applicant has obtained a Certificate of Public Convenience and Necessity (CPCN) for the proposed use. The operation and regulation of the use will be subject to review of the State of Delaware Public Service Commission.**
5. **The proposed use of the subject property as a regional wastewater facility is generally of a public or semi-public character and is essential and desirable for the general convenience and welfare of neighboring properties and the County.**

6. **The regional wastewater facility will possess sufficient capacity to serve a substantial volume of users beyond the boundaries of the development where the facility is currently located.**
7. **The Conditional Use, with the conditions placed upon it, will not have any adverse impact upon the County, its residents, or the environment.**
8. **The regional wastewater facility is appropriate for this site because it is in an area of residential development where wastewater treatment is not otherwise available.**
9. **The regional wastewater facility will be reviewed and approved by the Department of Natural Resources and Environmental Control (DNREC) and shall be designed and constructed in accordance with all other applicable Federal, State and County requirements, including those mandated by DNREC and other agencies having jurisdiction over the use.**
10. **Based on the record and recommendation of the Planning and Zoning Commission and the record created before the Council, the Conditional Use was approved subject to the ten (10) conditions, which will serve to minimize any potential impacts on the surrounding area and adjoining properties.**

Appendix 2



OVER 100 YEARS OF SUPERIOR SERVICE

Artesian Water Company



Artesian Wastewater Management



Artesian Utility Development



Artesian Water Pennsylvania



Artesian Water Maryland



Artesian Wastewater Maryland

November 12, 2020

Mr. Derrick Caruthers
DNREC
89 Kings Highway
Dover, DE 19901

RE: Draft Beaver Creek Amended Operations State Permit no. 359014-06

Dear Mr. Caruthers,

Artesian Wastewater Management Inc. (AWMI) is in receipt of the draft permit amendment for the Beaver Creek Wastewater Treatment Plant (Beaver Creek) State Permit Number 359014-06. The purpose of this letter is to provide official comment on the draft permit. AWMI's comments all pertain to requirements outlined in the Part III Special Conditions portion of the draft permit.

In our review of the permit AWMI staff found that some of the requirements in the Special Conditions do not match well with the current operation methodology and construction status at the Beaver Creek WWTP. Accordingly, AWMI has developed proposed revised language which more closely aligns with the current status of the plant. This proposed language is attached to this letter.

Thank you for allowing us the opportunity to provide comment on the draft permit amendment. Please do not hesitate to contact me if you have questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Konstanski".

Daniel Konstanski, P.E., BCEE
Manager of Engineering – AWMI

Proposed Language – Beaver Creek Wastewater Treatment Plant Draft Permit no. 359014-06

Requirement m.

Original:

Once the flow to the WWTP reaches 80% of the permitted treatment capacity of 150,000 gpd, the permittee must submit written notification to the Department. The Written notification must include a work plan for upgrades to be made to the WWTP in order to receive additional flow. The Permittee must submit a construction permit application, plans and specifications and a Design Engineer Report with applicable fees if the upgrades have not been permitted or there are changes to the previously permitted design.

Proposed:

Authorization for construction of improvements that would increase the capacity of Beaver Creek WWTP from 150,000 gallons per day (gpd) to 300,000 gpd has previously been granted under Construction Permit No. 295999-01, Operations Permit No. 359014-06 and DNREC Construction Authorization no. 0929. Upon completion of the improvements described in these documents, the Permittee shall submit to the Department updated Record Drawings and a Certificate of Completion stating that all necessary improvements for increasing the rated capacity of the Beaver Creek WWTP to 300,000 gpd have been completed.

Requirement n.

Original:

Any flow above the permitted treatment capacity of 150,000 gpd shall not be permitted until the construction is complete and an operating permit has been issued or amended by the Department for the increase in flow.

Proposed:

Along with the Certificate of Completion and Record Drawings, the Permittee shall submit to the Department a formal request for authorization to begin treatment and disposal of 300,000 gpd of wastewater. No increase in volume beyond 150,000 gpd shall be accepted by AWMI at the Beaver Creek WWTP until the Department has issued authorization to accept 300,000 gpd.

Requirement p.

Original:

Connections to the WWTP shall be from a combination of developments located within the Conditional Use Approval granted by Sussex County. The permittee must seek approval from Sussex County and the Department prior to the addition of connections. The permittee must submit a letter of approval to the Department for review and approval, from Sussex County that indicates the Engineering Department approves the permittee to use the Beaver Creek Regional WWTP to serve the proposed connections.

Proposed:

The Permittee is only authorized to provide service to parcels for which it has been granted a CPCN by the Delaware Public Service Commission. Both DNREC and Sussex County receive notification of all CPCN applications so no further notification by the Permittee is required. Furthermore, the flow treated at Beaver Creek WWTP shall only be from sources authorized by the Conditional Use Approval granted by

Sussex County for the Beaver Creek facility. Flow which does not meet these criteria cannot be treated at the Beaver Creek WWTP by the permittee.

Requirement q.

Original:

No industrial or commercial wastewater may be discharged the Beaver Creek Regional WWTP unless the Department has reviewed and approved the discharge in writing through a wastewater management plan. Any additions or changes to a wastewater management plan must be approved by the Department prior to the connection.

Proposed:

The raw influent wastewater to the Beaver Creek WWTP, regardless of its source, shall be made up of constituents that do not exceed the following concentrations. Any source of wastewater to be treated at the Beaver Creek WWTP which exceeds one of the following shall require pre-treatment to bring it below all of these levels prior to final treatment at the Beaver Creek WWTP.

- BOD – 400 mg/L
- TN – 80 mg/L
- TSS – 500 mg/L

Appendix 3



**AUTHORIZATION TO OPERATE AND DISCHARGE
UNDER THE LAWS OF THE
STATE OF DELAWARE**

Pursuant to the provisions of 7 Del. C., 6003

Artesian Wastewater Management, Inc.
664 Churchman's Road
Newark, DE 19702

is herein authorized to operate and maintain an on-site wastewater treatment and disposal system to service:

within the areas identified in the Beaver Creek Conditional Use Approval granted by Sussex County

Located on (tax map #: 2-35-30.00-24.00 & 32.00):

on the North East corner of SR 5 & 9, Sussex County, DE

to dispose of:

domestic waste generated by dwellings and community facilities as approved by the Department

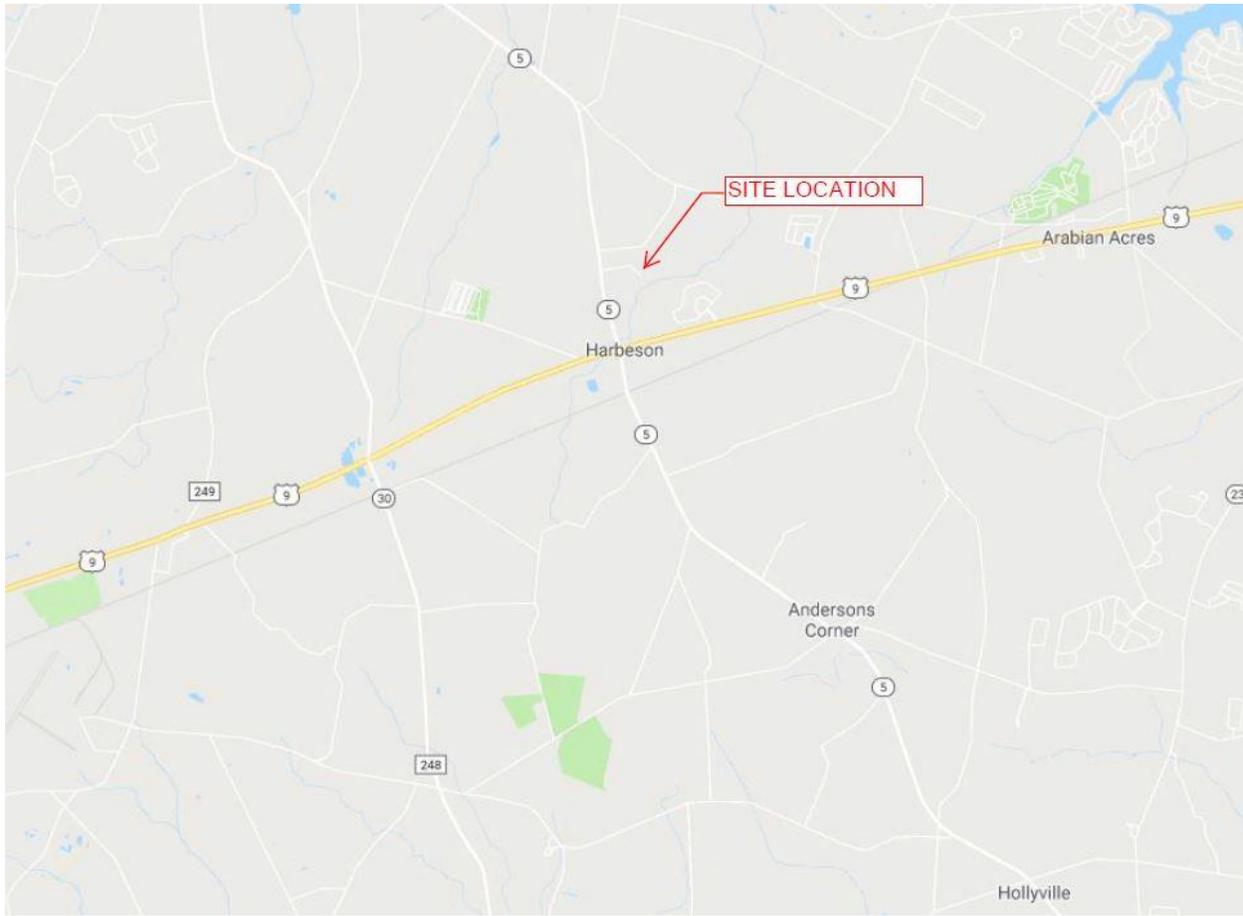
- 2. The effluent limitations, monitoring requirements and other permit conditions are set forth in Part I, II and III hereof.**

John J. Rebar Jr., Environmental Program Manager I
Ground Water Discharges Section
Department of Natural Resources and
Environmental Control

Date

Permit Name: Beaver Creek Regional Wastewater Treatment Facility
State Permit No. 359014-06
Effective Date: February 09, 2018
Amendment Date: December 22, 2021
Expiration Date: February 08, 2023
Page 2 of 14

LOCATION MAP





Part I

A. General Description of Discharges

The discharge shall be residential waste that is generated by dwellings located in the area as identified in the Conditional Use Approval from Sussex County. The influent is treated by a Sequencing Batch Reactor (SBR) system and disposed of into six (6) Rapid Infiltration Basins (RIB). The influent flows from the dwellings and facilities may not exceed a daily monthly average of 150,000 gallons per day (gpd). Once the second SBR is converted, and a digester is constructed, the facility will have the capacity to treat 300,000 gallons per day of wastewater.

B. Effluent Limitations

During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to treat and discharge to the RIB as identified in the above mentioned permit the limitations specified below:

1. The daily monthly average of influent flow shall not exceed 150,000 gpd
2. Biological Oxygen Demand (BOD) monthly average concentration shall not exceed 30 mg/l
3. Total Suspended Solids (TSS) monthly average concentration shall not exceed 30 mg/l
4. Total Nitrogen (TN) annual average concentration shall not exceed 10 mg/L
5. Total Phosphorous (TP) annual average concentration shall not exceed 7.85 mg/L
6. Fecal coliform concentration shall not exceed 200 col/100 ml

C. Monitoring Requirements

During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge to the RIB. Such discharge shall be monitored by the permittee as specified below:

1. Influent and effluent samples

Influent to the wastewater treatment plant and effluent monitoring requirements from the wastewater treatment plant prior to the discharge to the RIB shall be sampled for the following parameters:

Parameter	Unit Measurement	Monitoring Frequency	Sample Type	
			Influent	Effluent
Flow	Gallons Per Day	Continuous	Recorded	Recorded
BOD ₅	mg/L	2 x Month	Grab	Composite
TSS	mg/L	2 x Month	Grab	Composite
Total Dissolved Solids	mg/L	Quarterly	NA	Grab
Fecal Coliform	Col/100 ml	Quarterly	NA	Grab

Total Nitrogen	mg/L	2 x Month	Grab	Composite
Ammonia Nitrogen	mg/L	Monthly	Grab	Composite
Nitrate/Nitrite as Nitrogen	mg/L	Monthly	Grab	Composite
pH	S.U.	3 x per week	Grab	Grab
Total Phosphorus	mg/L	Monthly	Grab	Composite
Chloride	mg/L	Quarterly	Grab	Composite
Sodium	Mg/L	Quarterly	NA	Composite

2. Monitoring Well Requirements

The following monitoring wells:

DNREC ID
211955
211956
211957
211958

shall be sampled by the permittee for the following parameters:

Parameter	Unit Measurement	Monitoring Frequency	Sample Type
pH	S.U.	Quarterly	Field Test
Temperature	°F	Quarterly	Field Test
Specific Conductance	µS/cm	Quarterly	Field Test
Dissolved Oxygen	mg/L	Quarterly	Field Test
Depth to Water Table	Hundredth of a foot	Quarterly	Field Test
Ammonia Nitrogen	mg/L	Quarterly	Grab
Nitrate + Nitrite Nitrogen	mg/L	Quarterly	Grab
Total Nitrogen	mg/L	Quarterly	Grab
Total Coliforms	Col/100 ml	Quarterly	Grab
Fecal Coliform	Col/100 ml	Quarterly	Grab
Total Phosphorus	mg/L	Quarterly	Grab
Sodium	mg/L	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Total Dissolved Solids	mg/L	Quarterly	Grab

* Should water levels in the wells rise above the minimum isolation distance of two (2) feet, then the discharge shall be reduced at the area of concern and the Department shall be notified within 24 hours.

** Samples taken in compliance with the monitoring requirements specified above shall be taken at each monitoring well and observation well in accordance with procedures approved by the Department and listed in the State of Delaware, Field Manual for Groundwater Sampling (Custer, 1988).

D. Monitoring Reporting

In accordance with Section 6.9 of the *Regulations Governing the Design Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (the Regulations), the permittee shall submit to the Department an annual report summarizing operations, management, administration and maintenance of the facility for the calendar year. The annual report must be submitted to the Department on or before February 28th of each year.

Monitoring results obtained during the previous one (1) month/quarter shall be summarized for each month/quarter and reported on an approved On-Site Effluent/Groundwater Monitoring Report Form postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the Department at the following address:

Delaware Department of Natural Resources and Environmental Control
Ground Water Discharges Section
89 Kings Highway
Dover, DE 19901

E. Representative Samples

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

F. Test Procedures

Test procedures for the analysis of pollutants shall conform to the applicable test procedures identified in 40 C.F.R. Part 136, unless otherwise specified in this permit.

G. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation shall be retained for five (5) years. This period of retention shall be extended automatically including during any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

H. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods specified herein, then the results of such monitoring shall be included in the calculation and reporting of the values required in the appropriate Monitoring Report Form. Such increased frequency shall also be indicated.

Part II

A. MANAGEMENT REQUIREMENTS

1. Facilities Operation

The permittee shall properly maintain and operate as efficiently as possible all structures, systems and equipment for treatment control and monitoring which are used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance including, but is not limited to, effective performance based on designed facility removals, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.

Operation of this wastewater treatment and disposal facility requires a Class III Licensed Operator. The operator is responsible for operation, maintenance, and sampling of the facility. The operator shall perform site checks at a minimum of three times a week or as needed to adequately operate the facility.

An operator log shall be kept on site. All records and reports shall also be kept on site. This log shall, at a minimum, include the following information.

- a. Time spent at the treatment facility on any date.
- b. Details of the operation and maintenance performed on the wastewater treatment plant and the rapid infiltration basins on any date.
- c. The volume of wastewater treated and disposed of.
- d. Identification of and description of RIB in service.
- e. Identification of any RIB that has ponded for more than 72 hours.
- f. A record of any deviations from the operation and maintenance manual.
- g. General daily weather conditions.
- h. A record of all actions taken to correct violations of this permit and the Department's regulations.
- i. Record of all site management activities undertaken such as planting, reseeding.
- j. Record the date and volumes of sludge removed from the facility. A copy of the sludge hauling receipts with amounts removed shall be kept on file at the site.

2. Change in Discharge

Any usage authorized herein shall be consistent with the terms and conditions of this permit. Any anticipated facility expansions, production increases, or process modifications which

will result in new, different, or increased discharges must be reported by submission of a written report to the Department with the following timelines:

- a. Thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any change in information that was submitted to the Department.
- b. Thirty (30) days before any anticipated change which would result in noncompliance with any permit condition or the regulations.
- c. Immediately after the permittee becomes aware of relevant facts not submitted or incorrect information submitted in a permit application or any report to the Department. Those facts or the correct information shall be submitted as soon as possible and be included as part of the report.

3. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any limitations specified in this permit, the permittee shall contact the Ground Water Discharges at 739-9948, within 24 hours of noncompliance issue occurring. During non-business hours, weekends or holidays, the permittee shall call the Department's Enforcement Section at (800) 662-8802.

The permittee shall also provide the Groundwater Discharges Section with the following information, in writing, within five (5) days of becoming aware of such condition.

- a. A description of, and cause of noncompliance with any such limitation or condition.
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying condition.
- c. Steps taken or planned to reduce or eliminate reoccurrence of the noncompliance.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the State resulting from this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Removed Substances

Solids, sludges, filter backwash or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from entering the surface water or ground water and to comply with applicable federal or state laws and regulations.

6. Power Failures

An alternative power source, which is adequate to operate the wastewater treatment and disposal facilities, shall be available. If such alternative power source is not available, the permittee shall halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater facilities.

B. RESPONSIBILITIES

1. Reapplication for a Permit

At least 180 days before the expiration date of this permit, the permittee shall submit a new application for a permit or notify the Department of the intent to cease discharging by the expiration date. In the event that a timely and complete application has been submitted as determined by the Department, and the Department is unable, through no fault of the permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit are automatically continued and remain fully effective and enforceable until a decision is made on the new application.

2. Right of Entry

The permittee shall allow, at reasonable times, the Secretary of the Department of Natural Resources and Environmental Control, or his authorized representatives, upon the presentation of credentials and such other documents as may be required by law.

- a. To enter upon the permittee's premises where the on-site wastewater treatment and disposal system is located or where any records are required to be kept under the terms and conditions of this permit.
- b. To have access to and copy any records required to be kept under the terms and conditions of this permit.
- c. To inspect any facility, equipment, monitoring method, monitoring equipment, practice or operation permitted or required under this permit; and
- d. To sample or monitor for the purpose of assuring permit compliance with any condition of this permit, the regulations or 7 Del C., Chapter 60.

3. Transfer of Ownership and Control

No person shall transfer a permit from one location to another or from one piece of equipment to another. No person shall transfer a permit from one person to another unless thirty days written notice is given to the Department, indicating the transfer is agreeable to both persons, and approval of such transfer is obtained in writing from the Department, and any conditions of the transfer approved by the Department are complied with by the transferor and the transferee.

The notice to the Department shall contain a written agreement between the transferor and the transferee, indicating the specific date of proposed transfer of permit coverage and acknowledging responsibilities of current and new permittees for compliance with and liability for the terms and conditions of this permit. The notice shall be signed by both the transferor and the transferee.

4. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Monitoring data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013.

5. Permit Amendment, Revocation and Termination

This permit may be amended, terminated, or revoked in whole or in part during its term for cause including, but not limited to, any of the following:

- a. Violation of any terms of conditions of this permit, the regulations, 7 Del. C., Chapter 60 or failure to pay applicable Department fees;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. If the Department finds that the health, safety or welfare of the public requires emergency action, the Department shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, the Department shall provide the permittee a revocation hearing and prior notice thereof. Such hearings shall be conducted in accordance with 7 Del. C., Chapter 60.

6. State Laws

This permit shall not be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

7. Property Rights

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

8. Severability

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

A. SPECIAL CONDITIONS

- a. The RIB shall be operated so that one basin receives all flow from a 24-hour period. At the end of the 24-hour period, the next RIB in sequence shall be placed into operation. If operation of the RIB deviates from this plan, the permittee must notify the Department and note any deviations clearly in the operator's log.
- b. If ponding in any single RIB, or portion thereof, exceeds 72 hours following RIB loading, the permittee shall report the incident to the GWDS in accordance with Part II A.3 of this permit.
- c. If at any time a RIB does not drain before its next scheduled dosing period, the Department must be notified immediately.
- d. Connections or additions to the on-site wastewater treatment and disposal system other than those indicated on the approved plans will not be allowed without prior approval of the Department.
- e. Roof downspouts, foundation drains, area drains, storm sewers, combined sewers or appurtenances thereto or any sewer or device carrying storm water shall not be connected to the on-site wastewater treatment and disposal system unless designed to.

- f. If the permittee installs new monitoring wells/observation wells or replaces any existing monitoring wells/observation wells, the permittee shall submit to the Department new elevation details relative to the common benchmark previously established.
- g. A valid sludge hauling contract shall be maintained for the life of the system. A copy of the waste manifest shall be made available to the Department during the annual compliance inspection or upon request. Any changes in the sludge haulers shall be reported to the Department immediately.
- h. This permit does not relieve the permittee of complying with any other applicable Federal, State or local regulations.
- i. The Department will conduct annual compliance inspection with the facility's licensed operator of the on-site wastewater treatment and disposal system. A fee will be charged.
- j. The wastewater utility shall maintain a wastewater Certificate of Public Convenience and Necessity (CPCN) through the Public Service Commission (PSC) for the Community On-site Wastewater Treatment and Disposal System (OWTDS) permitted herein.
- k. Mandatory connection to central or municipal sewer shall be determined by the Public Service Commission and Sussex County Council.
- l. The RIB surface must be maintained as necessary to remove any impedance of infiltration. Any maintenance activity scheduled, or emergency must be performed when the basin is dry.
- m. Prior to the facility receiving over 150,000 gpd of influent flow, the Permittee shall complete all required upgrades identified in Construction Permit No. 295999-01, Operations Permit No. 359014-06 and DNREC Construction Authorization No. 0929 and submit to the Department updated Record Drawings and a Certificate of Completion stating that all necessary improvements for increasing the rated capacity of the Beaver Creek Regional WWTP to 300,000 gpd have been completed. Upon review/approval of submitted documents, the Department shall authorize the increased influent flow.
- n. The Permittee shall submit to the Department a formal request for authorization to begin receiving up to 300,000 gpd of raw influent for treatment and disposal at the Beaver Creek Regional WWTF along with updated Record Drawings and a Certificate of Completion to verify the completion of WWTF upgrades. No increase in influent volume beyond 150,000 gpd shall be accepted by AWWMI at the Beaver Creek Regional WWTF until authorized by the Department.
- o. The permittee shall provide a written quarterly update to the Department of any planned connections to the regional wastewater facility. This update shall include anticipated dates of when connections will occur.
- p. The Permittee is only authorized to provide service to parcels for which it has been granted a CPCN by the Delaware Public Service Commission. Additionally, the Beaver

Creek Regional WWTF is only authorized to treat influent flow from sources authorized by the Conditional Use Approval granted by Sussex County. The Permittee shall notify the GWDS when CPCN is granted by the Delaware Public Service Commission or when Condition Use Approval is granted by Sussex County. The notification shall include detailed narrative information regarding agreements, interconnections, and influent flow sources/areas along with information of how conditional use approvals and CPCNs fit into the bigger regional sewage management plan.

- q. The Permittee shall collect an influent grab sample twice per month for BOD5, TDS, TSS, and TN. If influent concentrations exceed 80 mg/L TN, 400 mg/L BOD5, and 500 mg/L TSS for two consecutive months, the Permittee shall perform an investigation and require pretreatment from any source exceeding those concentrations.
- r. Once the permit reaches 80% of the 300,000 gpd disposal capacity based on a period of seven (7) consecutive days, the permittee must submit written notification to the Department. The written notification must include a work plan for construction of the next permitted phase or indicate that the permittee will not be treating and disposing of flow greater than 300,000 gpd. The permittee must submit a construction permit application, plans and specifications and a Design Engineer Report with applicable fees for review.
- s. On an annual basis, the Permittee shall collect a 24-hour flow weighted composite sample (except where noted) of treated wastewater from the final treatment process and analyze the sample for the following inorganic constituents:
 - aluminum
 - arsenic
 - barium
 - boron
 - cadmium
 - chromium
 - cobalt
 - copper
 - cyanide
 - fluoride
 - iron
 - lead
 - manganese
 - molybdenum
 - mercury
 - pH (instantaneous)
 - nickel
 - selenium
 - silver
 - sulfate
 - zinc

Samples shall be properly prepared, preserved, transported, and analyzed in accordance with the methods approved by the Department. Analytical results shall be submitted to the Groundwater Discharges Section in the annual monitoring report due by February 28th each year.

- t. On an annual basis, the Permittee shall collect a grab sample of treated wastewater from the final treatment process and analyze the sample for the following organic constituents:
- benzene
 - benzo-a-pyrene
 - carbon tetrachloride
 - chloroform
 - 1,1-dichloroethane
 - 1,2-dichloroethane (EDC)
 - 1,1-dichloroethylene (1,1-DCE)
 - ethylbenzene
 - ethylene dibromide (EDB)
 - methylene chloride
 - PAHs: total naphthalene plus monomethylnaphthalenes
 - phenols
 - toluene
 - 1,1,2,2-tetrachloroethane
 - 1,1,2,2-tetrachloroethylene (PCE)
 - 1,1,1-trichloroethane
 - 1,1,2-trichloroethane
 - 1,1,2-trichloroethylene (TCE)
 - vinyl chloride
 - xylenes (total)

Samples shall be properly prepared, preserved, transported, and analyzed in accordance with the methods approved by the Department. Analytical results shall be submitted to the Groundwater Discharges Section in the annual monitoring report due by February 28th each year.